



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

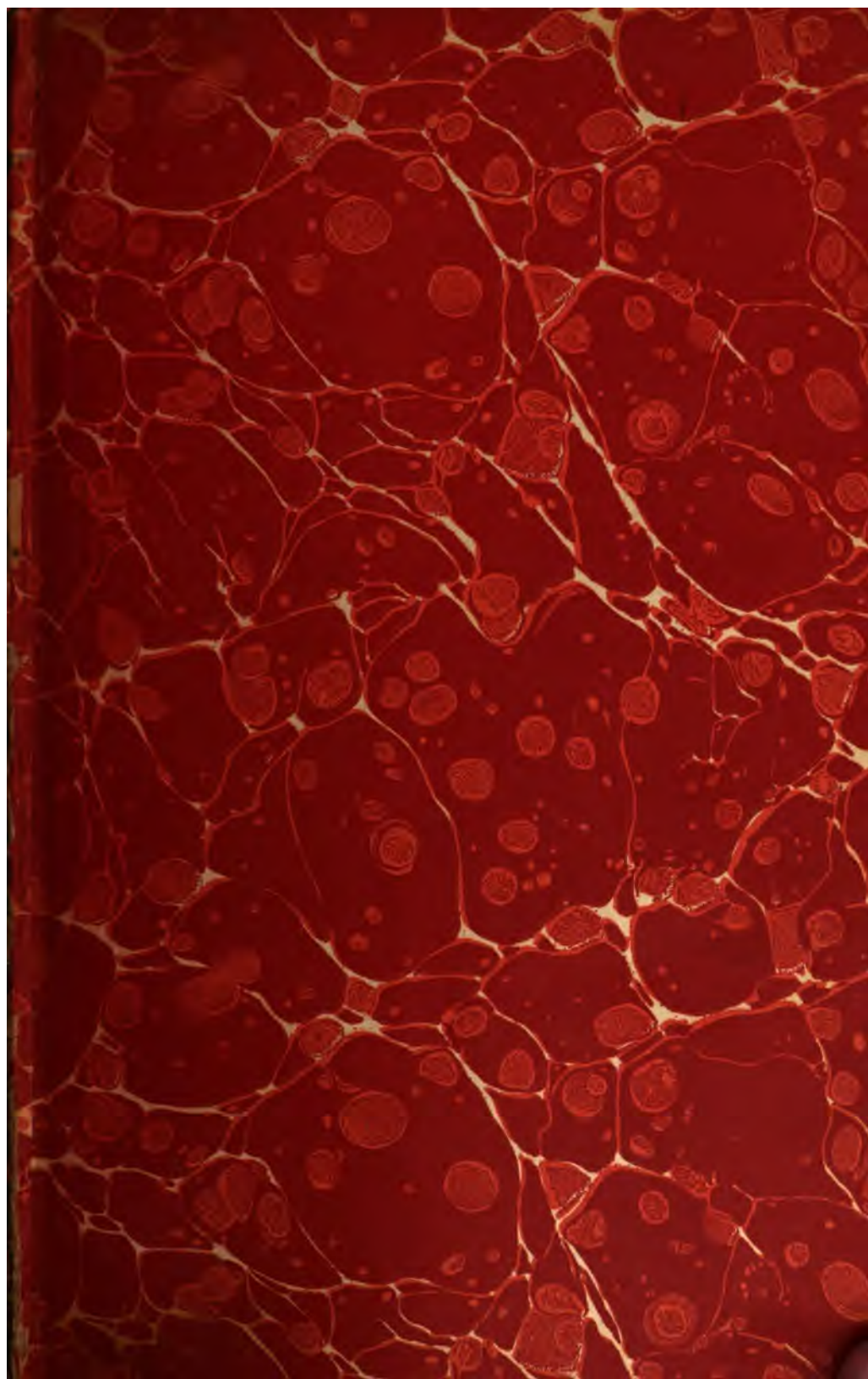
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



Class _____

Book _____

PRESENTED BY _____





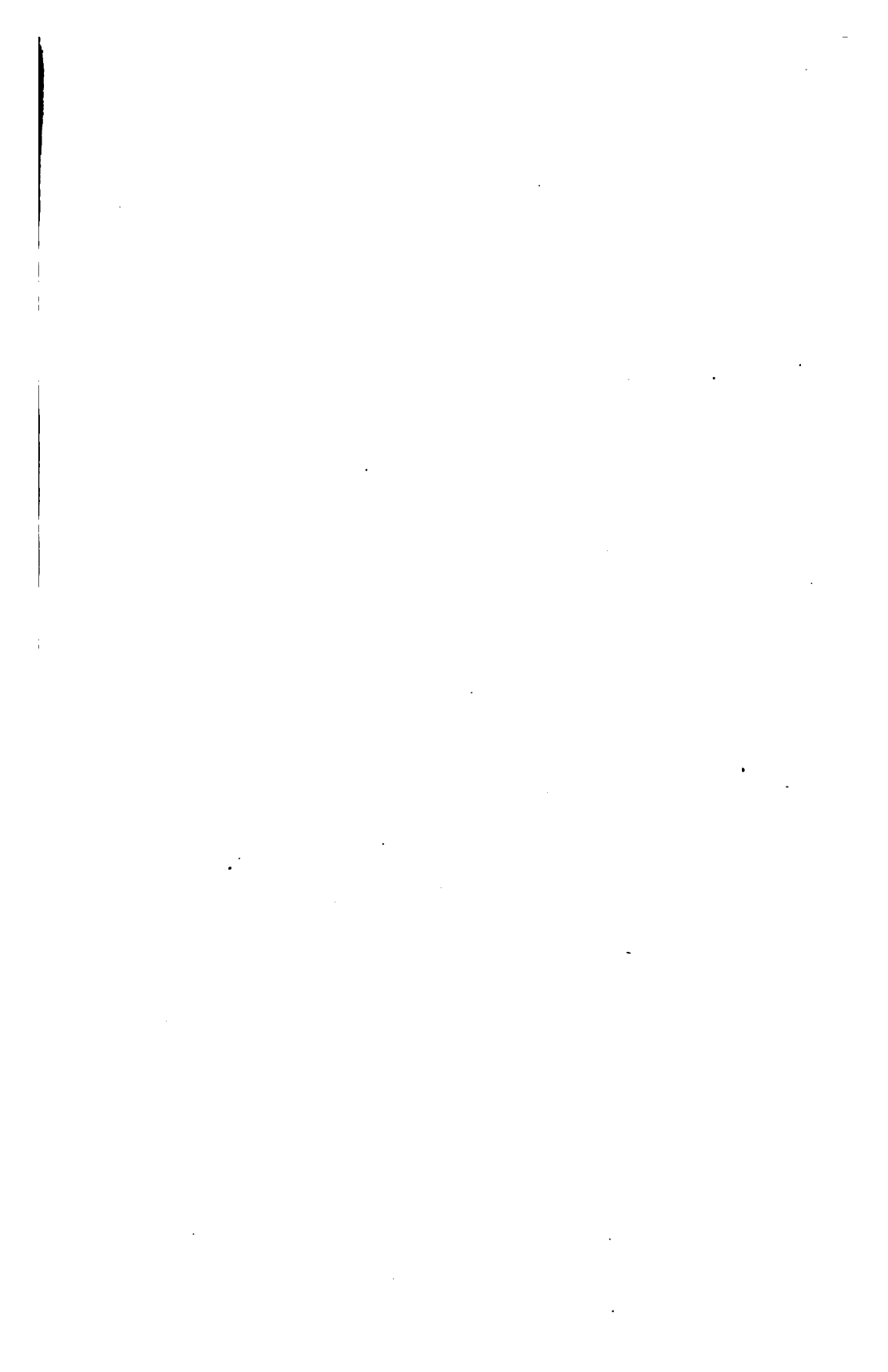
•

•

•

•





COMMITTEE ON
RIVERS AND HARBORS

U.S. Congress HOUSE OF REPRESENTATIVES

Hearings, Reports, Laws, Etc.

DECEMBER 1, 1916

TO

DECEMBER 1, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

HE393
.A13
1918c

HE393
.A13
1918c

CONTENTS.

(The hearings are arranged in alphabetical order. At the end of the volume will be found copies of reports on the bills, river and harbor laws of 1917 and 1918, and itemized statements of appropriations included in the bills.)

1. Altamaha, Oconee, and Ocmulgee Rivers, Ga., February 9, 1918.
2. Anacortes Harbor and Skagit River, Wash., January 4, 1918.
3. Appomattox River at Petersburg, Va., January 19, 1918.
Atlantic Intracoastal Waterway. See Norfolk, Va., to Beaufort Inlet, N. C.,
waterway; also Chesapeake and Delaware Canal.
Atlantic Ocean, Canal from, to Gulf of Mexico. See Florida.
Bank protection work. See Sewall System of Bank Protection for River
Control.
Bay Ridge, N. Y. See New York Harbor.
Beaufort Inlet, N. C., Waterway from Norfolk, Va., to. See Norfolk, Va., to
Beaufort Inlet, N. C., waterway.
Beaufort, N. C., Waterway to Cape Fear River. See Norfolk, Va., to
Beaufort Inlet, N. C., waterway.
4. Beverly Harbor, Mass., January 19, 1918.
Boats. See Inland Water Transportation.
5. Boston Harbor, Mass., January 6, 1917.
Cairo, Ill. See Ohio River.
Cape Fear River, N. C., waterway to Beaufort, N. C. See Norfolk, Va., to
Beaufort Inlet, N. C., waterway.
6. Chesapeake and Delaware Canal, January 6, 1917.
Clatskanie River, Oreg. See Oregon and Washington.
Columbia River, Oreg. and Wash. See Oregon and Washington.
Coos Bay, Harbor, and River, Oreg. See Oregon and Washington.
Coquille Bar, Harbor, and River, Oreg. See Oregon and Washington.
7. Cumberland River above Nashville, Tenn., January 14 and 16, 1918.
Cumberland Sound, Ga. and Fla., Canal from, to Gulf of Mexico. See
Florida.
Dredging. See Shipping Board.
East River, N. Y. See New York Harbor.
8. Erie, Lake, and Ohio River Canal, May 9, 1918.
Estimates for river and harbor improvements. See River and Harbor
Appropriation bills.
9. Florida, Canal across, September 6, 1918.
10. Galveston Harbor, Tex., January 24, 1918.
Goltra, E. F. See Inland Water Transportation.
Gulf Intracoastal Waterway. See Vermilion River, La., and channel to
connect with Inland Waterway.
Harlem Kills, N. Y. See New York Harbor.
Harlem River, N. Y. See New York Harbor.
Hell Gate, East River, N. Y. See New York Harbor.
Hoffman Island, N. Y., and Swinburne Island, channel between and Staten
Island. See New York Harbor.
Hudson River Channel, N. Y. See New York Harbor.
Ice-breaking vessel for New York Harbor. See New York Harbor.
11. Inland Water Transportation, January 25, 1918.
Keller, Col. Charles. See Inland Water Transportation.
12. Key West Harbor, Fla., January 14, 1918.
Kissimmee River, Fla. See Oklawaha and Kissimmee Rivers.
Lake Erie and Ohio River Canal. See Erie Lake.
Long Beach Harbor, Cal. See Los Angeles Harbor and Shipping Board.
13. Los Angeles and Long Beach Harbors, Cal., January 22 and 23, and Feb-
ruary 5, 1918. See also Shipping Board.
Louisiana Intracoastal Waterway. See Vermilion River.
Mexico, Gulf of, Canal from Cumberland Sound to. See Florida.
Mississippi River, construction of barges and experimental navigation on.
See Inland Water Transportation.
14. Mississippi River, impounding of water above Keokuk Dam, February 14
and 15, 1917.

15. Missouri River at and near Glasgow, Mo., January 19, 1917.
16. Missouri River from Kansas City to the mouth, December 10, 1917.
17. Mobile Harbor, Ala., February 1, 1918. See also Shipping Board.
Navigation. See Inland Water Transportation.
Newark Bay, N. J. See Shipping Board.
18. New York Harbor, N. Y., January 30, 1918.
19. Norfolk, Va., to Beaufort Inlet, N. C., waterway from, December 15, 1916.
Ocmulgee River, Ga. See Altamaha, etc.
Oconee River, Ga. See Altamaha, etc.
20. Ohio River at Cairo, Ill., January 22 and February 5, 1918.
Ohio River Canal, Lake Erie and. See Erie Lake.
21. Oklawaha and Kissimee Rivers, Fla., January 8, 1917.
22. Oregon and Washington Improvements, January 8, 1917.
Pollock Rip Channel, Mass. See Taunton River, etc.
Rates competitive with water lines. See Inland Water Transportation.
Red Hook, N. Y. See New York Harbor.
Revetment work. See Sewall system, etc.
23. River and Harbor Appropriation Bill, May 1, 2, 3, and 5, 1917. Statements
of Col. Henry C. Newcomer on recommendations made by the Secretary of
War.
24. River and Harbor Appropriation Bill, January 4, 5, 7, 8, 9, 11, 12, 14, 15,
and 16, 1918. Statements of Col. Henry C. Newcomer on the estimates
and recommendations of the Secretary of War.
River navigation. See Inland Water Transportation.
St. Marks, Fla., canal from, to St. Marys, Ga. See Florida.
St. Marys, Ga., canal from, to St. Marks, Fla. See Florida.
Secretary of War, recommendations of the. See River and Harbor Approp-
riation bills.
25. Sewall system of Bank Protection for River Control, January 9, 1918.
26. Shipping Board, United States, relation of, to Improvements for Rivers and
Harbors, February 6, 1918.
Stuslaw Bay and River, Oreg. See Oregon and Washington Improvements.
Skagit River, Wash. See Anacortes Harbor, etc.
27. Stamford Harbor, Conn., January 19, 1918.
Staten Island, N. Y., channel between, and Hoffman and Swinburne
Islands. See New York Harbor.
Swinburne Island, N. Y., channel between Staten Island and Hoffman and
Swinburne Islands. See New York Harbor.
28. Taunton River, Mass., January 12, 1918.
29. Tenants Harbor and Wills Strait, Casco Bay, Me., February 5, 1918.
30. Tennessee River between Chattanooga, Tenn., and Browns Island and above
Chattanooga, January 15, 1918.
31. Vermillion River, La., and Channel to Connect with Inland Waterway,
January 18, 1918.
Vessel, ice-breaking. See New York Harbor.
Vessels for river navigation. See Inland Water Transportation.
Washington and Oregon Improvements. See Oregon, etc.
Waterways. See Chesapeake and Delaware Canal, Inland Water Trans-
portation, and Norfolk, Va., to Beaufort Inlet waterway.
Willamette River, Oreg. See Oregon and Washington Improvements.
Wills Strait, Casco Bay, Me. See Tenants Harbor, etc.
Yamhill River, Oreg. See Oregon and Washington Improvements.
Yaquina Bay, Harbor, and River, Oreg. See Oregon and Washington
Improvements.
32. Minority report on river and harbor bill, by Mr. Kennedy, May 12, 1917.
33. Conference report on river and harbor bill, by Mr. Small, August 2, 1917.
34. River and harbor act, approved August 8, 1917.
35. Itemized statement of appropriations to be included in river and harbor
bill as decided upon by the committee February 20, 1918.
36. Report on river and harbor bill, by Mr. Small, March 1, 1918.
37. Minority report on river and harbor bill, by Mr. Frear, March 1, 1918.
38. Conference report on river and harbor bill, by Mr. Small, July 2, 1918.
39. River and harbor act, approved July 18, 1918.
40. Statement showing amounts appropriated and allotted for maintenance
and improvement of certain works of river and harbor improvement
under the provisions of the river and harbor act approved July 18, 1918.

ALTAMAHA, OCONEE, AND OCMULGEE RIVERS, GA.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF ALTAMAHA, OCONEE, AND OCMULGEE RIVERS, GA.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

FEBRUARY 9, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

ALTAMAHA, OCONEE, AND OCMULGEE RIVERS, GA.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., February 9, 1918.

STATEMENT OF THE HON. W. W. LARSEN, OF GEORGIA.

MR. LARSEN. Mr. Chairman and gentlemen of the committee, some time ago I appeared before you for the purpose of requesting a recommendation of the committee to the Board of Engineers for a reopening of the Kingman report on the Altamaha River system with a view of taking additional testimony and recommending the report, or such other appropriation for the system as might be deemed advisable. The committee was at that time generous in making the recommendation and the Board of Engineers accordingly reopened the case. Col. John Millis, of Savannah, Ga., was ordered to take testimony and make report in said matter.

I do not know whether the testimony has been concluded but much has been taken. I was present when considerable testimony was delivered and know that other has been taken, some of which I have read. I received a telegram from Col. Millis yesterday saying that he had not yet filed report, but hoped to be able to do so during the month of February. I do not know what recommendation Col. Millis will make to the board, and, of course, I am not prepared to say what disposition or finding will be made by the board, but, feeling that the circumstances at least warrant considerable increase in the annual appropriation heretofore made, I have requested that I might be permitted to appear before the committee this morning for the purpose of making a brief statement relative to the matter. I am hoping that the report and recommendation of Col. Millis, together with the findings of the Board of Engineers, will be had before the next rivers and harbors appropriation bill is passed by the House, and feeling that an increased appropriation will be recommended, I desire to say to the committee, that if such should be the case I shall endeavor to induce the committee and the House to agree to such amendment of the bill as will make available at the earliest practicable date, an additional appropriation.

The Altamaha River system comprises the Altamaha, the Oconee, and the Ocmulgee Rivers, the latter two uniting to form the Altamaha. The Altamaha is 140 miles in length and is navigable the entire distance. The Oconee is 300 miles in length and is navigable 145 miles, and the Ocmulgee is 350 miles in length and navigable 205 miles. The system drains about 15,000 square miles, all of said territory being embraced in the State of Georgia. Of the entire river system about 480, or perhaps 490 miles, are navigable. The three

rivers traverse the territory of the twelfth congressional district of Georgia, which I have the honor to represent, and there is in this territory about 360 miles of navigable river, hence, my special interest in the system. The navigable portion of these rivers touch 25 counties with a population of about 500,000 and a taxable wealth of approximately \$150,000,000. The entire system extends through 45 counties, about one-third of the total number of counties of the State of Georgia, and certainly the best section.

The annual freight tonnage on the system is from 135,000 to 170,000 tons, with an approximate value of from three to five million dollars per annum. It is estimated that the improvements on the rivers has resulted in a saving in freight rates of from 25 to 40 per cent.

The Altamaha River exceeds both in amount of variation and tonnage. The other two rivers are practically equal, both in amount and value of tonnage, but during the past three years the tonnage of the Oconee has exceeded that of the Ocmulgee.

In 1907 a change was inaugurated with reference to the appropriation of the Altamaha River system, which I fear has resulted in a discrimination against the Oconee River. Prior to that time the appropriations made for the rivers comprising this system were made separately for each river, but at that time the rule was changed so as to appropriate a lump sum for the system, and since that time it has happened that the expenditures on the Oconee River have not nearly equaled those of the other rivers comprising the system. I only have at my command the expenditure during the past five years, but during this time there has been expended on the Oconee \$54,419.79, on the Ocmulgee \$152,114.78, and on the Altamaha \$81,670.57. I have not the figures before me, but feel safe in saying that the expenditure during the past five years do not materially differ from those of the preceding five. From this you will see that the expenditure on the Ocmulgee exceeds by nearly three times those on the Oconee. Let's see what has been the result.

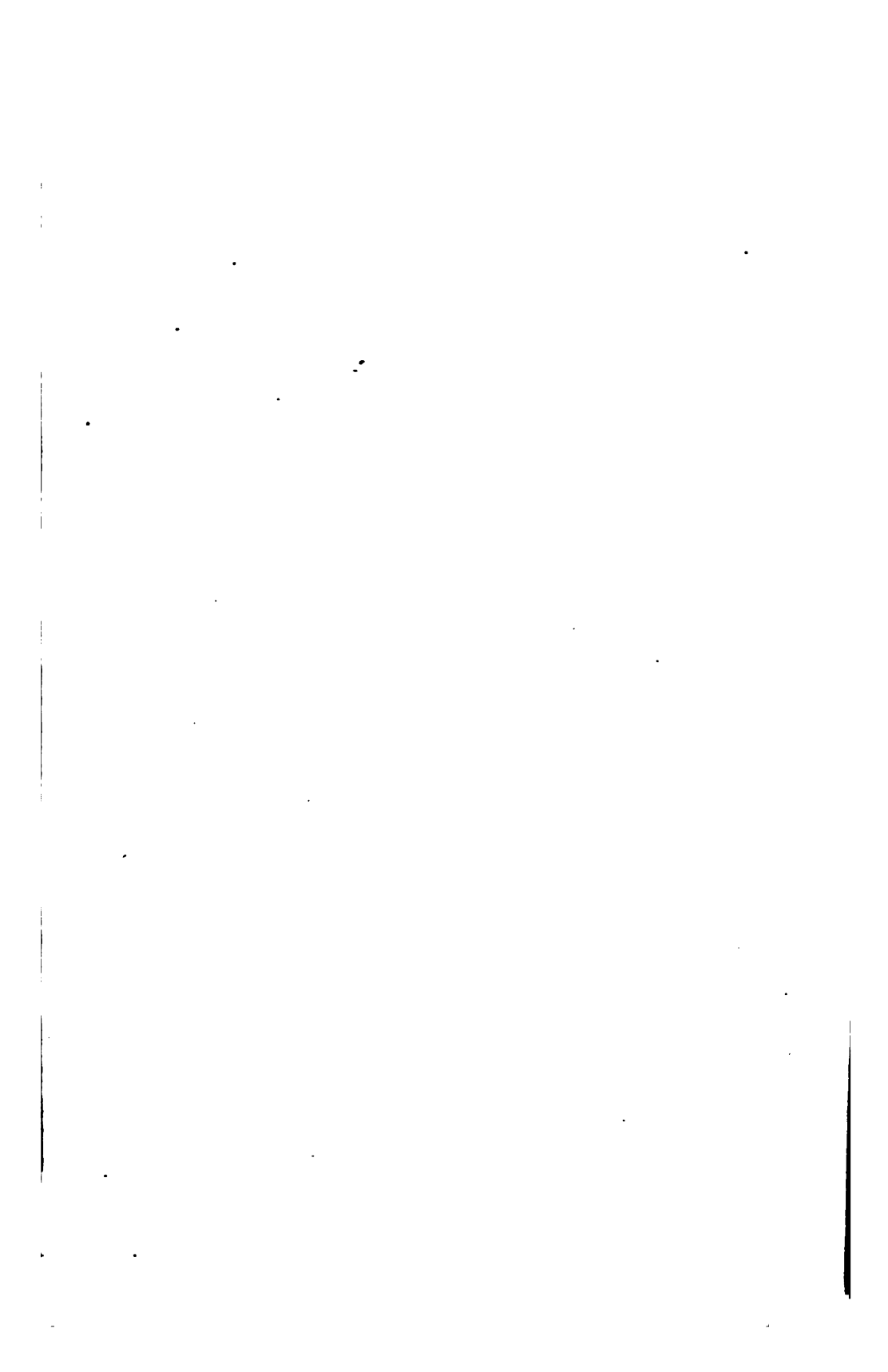
The report shows that on the Ocmulgee River there has been constructed about 4,000 linear feet in bank protection in the vicinity of Macon, Ga., the head of navigation on that river; that 3 miles of sand shoals in the same vicinity have been dredged; and that the necessary snagging work has been done throughout the entire length of the river, 205 miles. On the Oconee the only work that seems to have been done, according to the report, is the cleaning out of 20 miles of the river above Dublin and 30 miles below it; in other words, that of the 145 miles of navigable stream on this river only 50 miles have been put into shape for navigation.

The report shows also that there is now 50 miles of this river that has not been cleared of snags. Do not understand me as complaining about what has been done on the Ocmulgee, for such is not my intention. But I regret the fact that so little has been done upon the Oconee and simply mention the improvements on the Ocmulgee in order to impress upon the committee the importance of immediate action in behalf of this splendid Oconee River. I say splendid, speaking advisably. In spite of the disadvantages, it has been such as to create and maintain commerce equal to that carried on upon the Ocmulgee.

It is impossible to develop any of these rivers to that degree of efficiency which the necessities demand upon the meager appropriations heretofore made. The annual appropriation of \$40,000 is the amount recommended in 1912, five years ago; conditions have so changed during this time that the appropriation made at that time would be the equivalent of \$60,000 or \$80,000 now, and I feel that, in view of the Kingman report and the existing conditions, the committee should realize the necessity confronting the people and should at least increase the appropriation to such amount as I have indicated.

The CHAIRMAN. The system of rivers composed of the Altamaha, Oconee, and Ocmulgee Rivers, Ga., are classified in the Annual Report of the Chief of Engineers as one group and appropriations have been made for the same as one system. The existing project for the improvement of these rivers was adopted by the river and harbor act of July 25, 1912, in accordance with a report published in House Document No. 443, Sixty-second Congress, second session. This report recommended limiting the annual appropriation for the maintenance and improvement of these rivers to \$40,000 per annum. The operations upon these rivers and their status as to the condition of the improvement are set forth in the Annual Report of the Chief of Engineers. As the result of evidence submitted to the committee by Hon. W. W. Larsen, Representative in Congress, and local citizens tending to show that the limitation upon the annual appropriation should be removed and that increased appropriations were necessary, the Committee on Rivers and Harbors, on the 29th day of June, 1917, adopted a resolution referring the last report on this system of rivers to the Board of Engineers for Rivers and Harbors, asking them to review the reports and determine whether, in their opinion, the annual appropriation for this system of rivers should be increased. The Board of Engineers for Rivers and Harbors has not yet submitted this last annual report.

(Thereupon the committee adjourned.)



ANAC

==

COMI

CHAKI
TROMA
TROMA
WILLI
SANTÉ
Z. G. H.
MART.
1948
1949
1950

ANACORTES HARBOR AND SKAGIT RIVER WASHINGTON

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF ANACORTES HARBOR AND SKAGIT RIVER, WASHINGTON

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 4, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

ANACORTES HARBOR AND SKAGIT RIVER, WASH.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Washington, D. C., January 4, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. Gentlemen, Mr. Hadley wanted to be heard briefly and I told him the committee, I thought, would meet his convenience and not make it necessary for him to come back later.

We will hear from you now, Mr. Hadley, if it meets with the approval of the committee.

STATEMENT OF HON. LINDLEY H. HADLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON.

Mr. HADLEY. I will appreciate the opportunity of appearing at this time if it suits the convenience of the committee. Of course, I do not want to interfere with their work.

The CHAIRMAN. I understand your statement will not take very long.

Mr. HADLEY. No indeed, Mr. Chairman. These are two items that were carried in a previous bill. The bill in the second session of the Sixty-fourth Congress, which passed the House but failed in the Senate, carried these two items—one for the Skagit River in the State of Washington, and the other is what is known as the Cap Sante Waterway in Anacortes Harbor, Wash. One is in House Document No. 935, of the Sixty-third Congress. That is the Skagit River improvement. The other is printed in House Document No. 1117 of the Sixty-fourth Congress.

Now, in view of the fact that the committee has considered and favorably acted upon these projects before and incorporated them in your bill, and in view of its passage by the House, I would not deem it necessary to make any statement in regard to them anew if I understood just what the policy of the committee may be in regard to framing the bill. That I do not desire to inquire into, of course. That may not have been determined. But I say that for the reason that these are matters of merit and of local emergency. I think the committee would recognize that at once by referring to these documents without comment. In the event the committee is limiting its bill, however, to strictly war emergencies, as was contemplated by the last bill, then perhaps the situation would call for more comment. In either event I will simply speak of the items briefly.

In the case of the Skagit River, that is a great river entering the Skagit Bay and Puget Sound. It is one of the largest rivers in the Northwest. About three and a half miles below Mount Vernon,

which is the county seat of Skagit County, there is a bar. I think it is about seven miles above the mouth of the river. The river at the lower end spreads out in fan-like fashion; or, at least, it did originally, with many mouths through a delta. In fact, it is a regular delta. It is alluvial, low, sandy, and of such formation that the river, which has great erosive power, being somewhat precipitous, above, and with a large volume of water, cuts and carves its way, so that its banks have to be protected in some way.

The Government has an existing project there, on which it has already spent over \$100,000, at the mouth of the South Fork of the river, consisting of a training dike or jetty. There are now two principal channels, the north and the south forks. The south fork is shorter and is the one mainly used, but the practical navigation is governed by favorable tide conditions, owing to the bar, and it is advisable that it be kept open for navigation purposes. It is open for 7 miles above the mouth and there a bar has formed. I think there is about 3 feet of water at high tide across the bar; and at low tide there is no navigation at all. The result is that vessels hang up on the bar and become stranded there. The remedy proposed is improvement by dredging and training walls.

The documents I refer to here will show briefly and fully the number of vessels plying on this river, which is all taken from the reports of the engineers, and the amount of commerce. There is to-day shown to be a commerce of more than \$3,000,000 on the river, and I am sure that is a very conservative estimate. It was so represented in the report. Furthermore, there were some details that could not be incorporated in the report. This is one of the richest valleys in the world, through which this river flows, and one of the most beautiful farming countries which I ever saw. It produces hay and oats in great quantities. The heaviest crops of oats are yielded in that locality, I presume, that are yielded in any part of the United States; certainly there are no heavier yields. It is a wonderful dairying country. The output of condensed milk and all dairy products is large—and also of potatoes. It is a great lumber section. There is a big lumber section back in the hills, which has been opened up for many years and with lumbering in the future for a generation. Much of this product is transported down by the river. Practically all of this commerce is affected by this bar and the report so shows. I am simply stating facts officially shown here, which the committee could read, if it had the time and it would not be necessary for me to state them. I would not go into them if it were not for the fact that there is really an alarming emergency in that locality.

Another thing: The freight rates are involved. The river rates are much less than the rail rates of the Great Northern Railroad from Seattle to Vancouver. The Northern Coast Line strikes this territory. The result is set out in this letter from the Mount Vernon Commercial Club, of Mount Vernon, in its report in detail, showing that thousands of dollars are gained when navigation facilities of the river are available to the farming community of that country, which would be lost if the navigation ceases; and they make the point that the navigation will cease with the accumulation of this bar and it will absolutely close the river, and the result will be that they will be at the mercy of the rail situation as time goes by. There is such a large production in this great valley that goes out, in the

way of food commodities and commodities for the benefit of the public generally, and for the benefit of the commerce of the world, that even in this period of war it is a matter of emergency. I realize that is a relative term; but I think if the committee has the opportunity to look into these facts and to look over these reports and consider them in relation to that subject alone, irrespective of the local conditions, that it could not, in fairness to the Government and to the country, in this present crisis, fail, upon a fair consideration of this report, to incorporate this project in the bill.

I will not take the committee's time to go into great detail, because the committee has all the particulars.

The CHAIRMAN. In the report, yes.

Mr. HADLEY. The other document relates to an improvement known as Cap Sante Waterway on Puget Sound and Anacortes Harbor at Anacortes, a city of the same name, which is at a point about 75 miles, perhaps, north of Seattle. It is at a point approximately midway between Bellingham and Everett. It is the only other deep-water harbor between them reached by rail, and it is a matter of some 75 miles between them by water, and sixty-odd miles by rail.

It is on the westerly side of this same valley that I have spoken of, but on the Sound side, while the river comes down from the mountains in the interior and empties into the Skagit Bay, an arm of the Sound. The city of Anacortes is very near the easterly end of the San Juan de Fuca Straits. It is on the northerly end of Fidalgo Island, and it is connected with the mainland across a slough by rail and highway. The city's population is about 6,000 and it is growing rapidly. There were about 40 industries located there at the time of this report and there are more now. It is a great fishing point. It is the center of the fishing industry of Puget Sound, really, geographically considered.

The wharfing facilities are on the northerly side of Guernes Channel. There is a bay on the easterly side, in which Cap Sante Waterway is situated. This bay is a quiet, sheltered and protected point. The other side is located so that it is affected by the extreme tidal currents, by high winds and heavy seas which at times make it impossible for smaller craft to be accommodated at all, and even the larger vessels plying on the Sound have difficulty there at times in docking.

Quite a number of the largest canneries of Puget Sound are located here, engaged in packing, marketing, and exporting fish to all parts of the world. The smaller craft that secure fish and bring them in for the use of the canneries have great difficulty in being accommodated in the course of the fishing season. The proposed improvement would afford the necessary accommodations in quiet water for light-draft vessels. The proposition is to dredge out the waterway on the recommendation of the Engineering Department to a depth of 12 feet, at mean lower low water, with a width of 150 feet at the outer end and 250 feet at the inner end, at an expense of \$84,000, the locality to share one-third, or \$28,000, and the Government to share two-thirds, or \$56,000. That arrangement has been made and I understand there is no doubt it could be carried out if the appropriation is made.

There are other vital conditions connected with the lumbering industry there which appear in the report also. The domestic and foreign commerce at that point are very large. The statistics concerning them are in the report and I ask the committee to give them consideration.

As a food-producing center, it is one of the most important upon Puget Sound. The dredging of this waterway so as to accommodate a fleet which is essentially an integral part of that industry, is regarded not only locally as of urgent necessity but, in my mind, it will contribute very largely to the demands of the current hour in that respect.

Now I should have said that at Skagit City, where the bar has formed on the Skagit River, an appropriation of \$30,000 is required.

The CHAIRMAN. You did mention that.

Mr. HADLEY. I just briefly give the skeleton of this situation and call the committee's attention to it for its further consideration. I appreciate the opportunity of even doing that; but I do not feel I can take the time to review what is in these reports, because the committee, at its leisure, can read the reports just as well.

The CHAIRMAN. That last report: I believe you said that is printed in House Document No. 1117, Sixty-fourth Congress, first session.

Mr. HADLEY. That is it; 1117, Sixty-fourth Congress, first session.

The CHAIRMAN. The members of the committee will be furnished with a copy.

Mr. HADLEY. I would appreciate that and hope the committee will look them over. And as time goes on, and I will say in the two or three years, in fact, since that report, the development of that country, like the development of all sections of the country, has been rapid; and commercially and as a producing center the commerce, instead of growing less, is growing more and more all the time and the conditions, therefore, are growing more and more exactly, from our viewpoint, all along the line.

I hope the committee, on consideration of the question, will see its way clear to incorporate these items again in the bill, because it is a matter of great local importance and, I think, of great public importance.

Mr. FREAR. As a question of policy, not affecting this particular project but this Anacortes Harbor on Puget Sound, the engineers say, on page 4, "that before the work is commenced local interests shall contribute the sum of \$28,000 toward the execution of the work." Then it says, further along, that "the whole amount of the Government's share, \$56,000, should be made available in one appropriation." On what basis do the engineers make that determination; can you tell us?

Mr. HADLEY. I do not know that I quite understand the question.

Mr. FREAR. The locality itself is to contribute \$28,000 and the Government is to contribute \$56,000. I am trying to find out on what basis that distribution is made.

Mr. HADLEY. I have not any information about it, except that the aggregate amount is to be distributed one-third and two-thirds.

Mr. FREAR. That is in your particular project?

Mr. HADLEY. Yes.

Mr. FREAR. Then again here, for this project on the Skagit River, it is required that local interests keep up all the dikes and all the river banks.

Mr. HADLEY. Yes.

Mr. FREAR. That is an unusual condition, judging from the average appropriations presented to us.

Mr. HADLEY. On the Skagit River the State and county authorities have been diking the river, and they have formed diking districts there under our diking laws, and have maintained a diking system above, so as to protect the river for many years. And I presume that is by reason of the facilities they had there and they thought possibly if that would be done perhaps it would be an inducement; I do not know.

Mr. FREAR. And the locality would be expected to maintain it?

Mr. HADLEY. I can only draw an inference from what I saw in the record. I remember in the Skagit River case the record shows a \$5,000 appropriation for maintaining the dike in the Anacortes Harbor project it is thought there will be no appropriation for maintenance at all. I am sorry I can not be more definite.

1. The first part of the paper is devoted to the study of the

properties of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

and to the study of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

APPOMATTOX RIVER AT PETERSBURG, VA.

HEARINGS

ON THE SUBJECT OF

THE IMPROVEMENT OF APPOMATTOX RIVER AT PETERSBURG, VA.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 19, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

APPOMATTOX RIVER, PETERSBURG, VA.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Saturday, January 19, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order. Gentlemen of the committee, we have several gentlemen who wish to be heard here this morning upon several improvements, and I suggest that the committee hear first those representatives who are here alone, because they will occupy less time. Judge Watson wishes to be heard upon an improvement for the Appomattox River, Va.

STATEMENT OF HON. WALTER A. WATSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF VIRGINIA.

Mr. WATSON. Mr. Chairman, I am not so unfortunate as to be here alone. I have a delegation of gentlemen from Petersburg, Va., who are present for the purpose of answering any questions the committee may choose to ask them, or for the purpose of offering any information the committee may desire.

The CHAIRMAN. Well, as a preliminary, will you make a general statement to the committee of the status of this work at Petersburg, and what you wish?

Mr. WATSON. Yes, sir, I will be very glad to do so.

Mr. Chairman, some of the committee are perhaps new members, and perhaps are not familiar with the project under consideration. To the older members of the committee I would not feel called upon to make any statement, because I think they are familiar with it. So far as the Government is concerned, its attention was first bestowed upon the Appomattox River in the vicinity of Petersburg about seven or eight years before the War between the States; 1852, I think was the time. At that time the Government had a survey made, looking to the improvement of the river between the city of Petersburg and its mouth, a distance of 11 miles. I would say that the Appomattox River is a stream about 140 miles in length, and drains an area of about 1,500 square miles; and from Petersburg to its mouth is tidal water, the mean tide being perhaps 3 feet. The project that is now before the committee was begun by the Government about the year 1901 or 1902, and looked to the diversion of the channel of the river for a distance of 2 or 3 miles. It contemplated a channel 80 feet wide, with a depth of 12 feet at high tide, and 9 feet at low tide; and I would say, in passing, that the Government has expended, first and last, upon the improvement of the river, and upon the said diversion project, some \$825,000. The city

of Petersburg, since the war, has spent over \$1,500,000, more than \$2 for every one that the Government has spent.

This diversion scheme, by the year 1912, had been about 96 per cent completed, according to the report of the Army engineers. The channel had been diverted, and a dike had been constructed for 3 or 4 miles, between the old channel and the new channel. Everything was done except the building of a dam at the head of the navigable stream, and a small conduit, which it was contemplated would go through the dam for the purpose of flushing the navigable channel. Two hundred and forty-nine thousand dollars, as I recall, had been appropriated by the Government for the diversion project, of which \$243,000 had been expended by the year 1912. I do not know for what cause, but in that year the Government work was suspended upon the dam, which had not been completed; and there came along about the same time an unusual freshet in the stream and washed away the Government's dam, or the greater portion of it.

The CHAIRMAN. When was that?

Mr. WATSON. That was in the year 1912, Mr. Chairman. That is the year, is it not, 1912?

The CHAIRMAN. I think so.

Mr. WATSON. That is my recollection of it.

The CHAIRMAN. That is my best recollection now.

Mr. WATSON. About that time it was discovered, if it had not theretofore been known, that the completion of the dam to the prescribed elevation, would result in time of freshet in backwater to such an extent that one of the small streams making into the river several hundred yards above the dam—

The CHAIRMAN. March, 1912, is the date, as it is stated in the report.

Mr. WATSON. That if the dam were completed to its prescribed height, backwater, in time of freshet, would be thrown into a small stream which makes into the river some several hundred yards above the dam, to such an extent as to flood the city; and also overflow the embankment or fill of the Norfolk & Western Railroad, which runs along the side of the river bank. So that it became obvious at that time, if it had not been before, that it would be necessary for the railroad company to elevate its track for a distance of some 2,000 feet or more, ranging from a few inches to 3½ feet; and for the city to construct a storm sewer, and also a flume, if that is the technical term—I am not an engineer—to inclose the waters of this small stream, known as Brick House Run, so as to prevent the flooding of the city in time of freshet by reason of the completion of the Government work.

When that condition became manifest, the Government very naturally suspended operations until the city of Petersburg and the railroad company could alter the physical condition at the points mentioned, so as to make it safe for the Government to complete its work. Any of you gentlemen familiar with the difficulty of securing cooperation between municipal and railroad authorities in matters of this character can appreciate the obstacles which confronted the people of the city at this stage.

It was some time, perhaps two or three years, before a working agreement could be obtained between the city authorities and the

railroad authorities, concerning this local work which was to be done. In 1916, just preceding the framing of your last river and harbor bill, I visited the city, and met the councilmen and aldermen, explaining to them as well as I could the situation in regard to this Government improvement. The city engineer at that time estimated that the work on the part of the city would perhaps cost about \$21,000. After the council and board of aldermen came to understand that the Government could not go forward with the work until these local conditions were relieved, they very promptly appropriated the money for the purpose of completing the city work. Col. Jervey, of the Engineer Corps of the War Department, visited the scene at that time, and being satisfied as to the conditions, he reported to the department, in a supplemental report, which you gentlemen will find embodied in your committee report accompanying the last regular bill, under date of December, 1916, on page 121 thereof, as follows:

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Norfolk, Va., December 19, 1916.

From: The District Engineer Officer, Norfolk, Va.

To: The Chief of Engineers, United States Army, Washington, D. C.

(Through the Division Engineer, Eastern Division).

Subject: Improvement of Appomattox River, Va.

1. Under date of March 2, 1916, I submitted to the Chief of Engineers, United States Army, through the division engineer, southeast division, a report in which I expressed my opinion that the city of Petersburg, Va., and the Norfolk & Western Railway Co. would have shortly substantially complied with the terms of an agreement entered into October 10, 1912, under which the United States was to complete the diversion project for the Appomattox River, Va., when certain work had been accomplished by the city of Petersburg and the Norfolk & Western Railway Co.

2. In this report a new estimate of the amount necessary to complete the work was given. At that time it was thought that the diversion work could be completed for a total of \$32,000, and that the channel work carried on under the head "General improvement" could be restored to its project dimensions for \$16,000.

3. I am now in receipt of a communication from the secretary of the Chamber of Commerce of Petersburg, Va., with which he forwards a certified copy of the action of the common council and the board of aldermen of the city of Petersburg, making the necessary appropriations to complete the work required to be done by the city of Petersburg, and a letter from the chief engineer of the Norfolk & Western Railway Co., in which he states that his company will proceed with the raising of its track as soon as the work contemplated by the city of Petersburg is completed. (Copies of these last two communications are inclosed herewith.)

4. The work to be done by the Norfolk & Western Railway Co. and the work to be done by the Federal Government should be carried on simultaneously, and it is probable that the railroad work will be commenced early in the spring of 1917. The Government should, therefore, be in position to begin carrying out its part of the agreement at the same time, and I am of the opinion that an item should be incorporated in the pending river and harbor bill appropriating the necessary funds for the work in question. Since the estimate of March 2, 1916, was submitted, there has been a marked advance in the cost of labor and materials, especially coal, and the estimate then given should be increased by 25 per cent in order to cover present conditions. A total of \$60,000 will therefore be needed, of which \$40,000 is required for completing the diversion project and \$20,000 for restoring the navigable channel to its project dimensions. There is at present on hand an unexpended balance of about \$10,000, all of which, in the opinion of this office, may be used in the maintenance of the general improvement. An additional appropriation of \$50,000 is therefore necessary, of which \$10,000 would be needed for general improvement and \$40,000 for completion of the diversion project. After the completion of the diversion project and the restoration of the navigable channel and to its

project dimensions, the cost of maintenance will be \$3,000 per year, of which \$1,000 will be applied to the diversion channel and \$2,000 to general improvement.

5. A copy of a letter from the traffic manager of the Furman Line, operating steamers between Petersburg and Richmond and intermediate landings, via City Point, Va., which shows the need of restoring the navigable channel to its project dimensions, is also inclosed herewith.

6. I therefore recommend that an item appropriating \$40,000 for completion of the diversion project at Petersburg, Va., and \$10,000 for maintenance of the general improvement be inserted, if possible, in the pending river and harbor bill. A proviso should be included to the effect that the money so appropriated shall not be available until the work to be done by the city of Petersburg, under the joint agreement of October 10, 1912, is completed, and the work to be done by the Norfolk & Western Railway Co., under the same agreement, is actually in progress.

J. R. JERVEY,
Lieutenant Colonel, Corps of Engineers, United States Army.

[First indorsement.]

OFFICE OF DIVISION ENGINEER, EASTERN DIVISION,
December 23, 1916.

To the CHIEF OF ENGINEERS:

Concurring in the recommendation of the district officer.

W. N. JUDSON,
Lieutenant Colonel, Corps of Engineers, Division Engineer.

The CHAIRMAN. That is the bill that passed the House, but did not pass the Senate?

Mr. WATSON. Ycs, sir.

Mr. KENNEDY. Have you noticed the first paragraph in the annual report of June 30, "Proposed operations"?

Mr. WATSON. Read it, please, sir.

Mr. KENNEDY. It says, under "Proposed operations":

No work on the diversion project at Petersburg is proposed during the fiscal year 1918, as the city of Petersburg and the Norfolk & Western Railroad Co. have not done the work agreed on in 1912, that would make it advisable for the Government to construct the dam above the navigable channel and complete the diversion project. The funds available are considered sufficient for the United States work of maintenance to June 30, 1919, and no additional appropriation is recommended for the new work for the fiscal year 1919, as it is not known when the city of Petersburg and the railroad company will do the work alluded to above.

Mr. WATSON. I noticed that, sir. I am coming to that. That is the whole point now in controversy.

Now, gentlemen, in accordance with the recommendations of the Chief of Army Engineers, in the last regular river and harbor bill, the committee followed the suggestions of Col. Jervcy and reported an item of \$10,000 for maintenance and general improvement, and an item of \$40,000 to complete the diversion scheme, which as already explained is the building of a short dam, with a conduit through it. The bill, as you know, passed the House of Representatives, but failed in the Senate.

However, in the meanwhile, the city of Petersburg, having appropriated the money to make the improvements requested by the War Department, went ahead with the work. The work consisted in the construction, as I have said, of a storm sewer, which was about three-fourths of the physical labor involved in the whole, and the boxing up of the small stream called the Brick House Run. When it had progressed to the completion of the storm sewer, Congress adjourned

without making provision for the Government end of the job. The Norfolk & Western Railroad Co. did not start, because the engineers of the War Department had suggested that its work should be simultaneous with the work of the Government, so that both propositions were hung up on our legislation in Congress.

I have just been to see Col. Newcomer this morning at the War Department, taking some of these gentlemen along, and talked over the whole situation with him. Col. Newcomer authorizes me to say that the War Department was as anxious to do this work as our people were to have done, and that the only thing they were waiting for was to have the local work completed, so that they could go on with the Government work safely. You will notice in the annual report—I do not know who prepared it—the engineer's office last year did not consider this work as especially emergent; but I understood Col. Newcomer to say now that the War Department considers that the work ought to be completed as soon as local conditions were such as to render it safe and practicable.

The CHAIRMAN. While you are on that, will you, or one of you gentlemen, make a brief statement of facts which, in your opinion, constitute its urgency, as to why it ought not to be postponed?

Mr. WATSON. I can only in a general way give you any light on that subject. That community has recently been very much enlarged in the way of population and commerce. As many of you know, the Dupont Gun Cotton Factory has been located at the mouth of the stream, which employs between 12,000 and 13,000 men. A city has arisen around that plant of 25,000 people. One of the principal can-tonments for the training and mobilization of our troops has been constructed upon the river, between Petersburg and its mouth, and the result is that there has been a great congestion of traffic in the community; not only a large increase in population, but a great increase in the commercial activities of the community. The railroads, as you can appreciate, have felt the undue strain at that point as they have in many other localities of the country. Transportation between the city of Norfolk and the city of Petersburg in aid of the railroads would be greatly enlarged if vessels of reasonable draft could reach deep water in the James River via the Appomattax. Traffic between the city of Richmond and the city of Petersburg would be greatly enhanced and made safer and easier by proper facilities in this river. According to the last report, which you will find there in 1917, you will see that the water borne commerce at that point was something over \$5,000,000 for the year 1916. I have not the figures for 1917, but can say that there has been no diminution in those figures, and perhaps they have increased. The traffic now is confronted with a depth of only 7½ feet at low water. The boats carrying the traffic now can safely draw only 6 feet 7 inches of water.

A very large proportion of the present commerce is under the control of the Government. It consists of gravel and sand, which is in very great demand at that point, at Norfolk, at the Jamestown Naval Base, at Hampton Roads, and at Newport News. The Government has commandeered that proposition. They have to haul all of that material in boats whose draft does not exceed 6 feet 7 inches, or to wait for unusual high tide so as to come over the bars in the channel. You gentlemen will realize that with larger boats

the traffic could be greatly increased, perhaps doubled or tripled, and maybe quadrupled.

Much of the outgoing commerce of Petersburg consists of manufactured tobacco. About one-half of the manufactured tobacco exported from the United States is exported from that point. It all now has to go by rail, congesting your railroad facilities. No coal can come to that community now, except by rail. There is no reason in the world why anthracite coal should not come from Baltimore by water, as it formerly did, and could come now, if boats of sufficient depth to make it profitable could navigate the stream. This community has almost unlimited possibilities in the way of water transportation to relieve the railroad situation, at what I consider, comparatively small cost. It would seem, therefore, under the circumstances, to be unreasonable for the Government to delay longer the completion of a project upon which it has expended near a quarter million dollars, when only some forty thousand dollars are required to finish the original plan. The very statement of the proposition carries its refutation. Left as it is the rains and the tides are ceaselessly undoing what has been done, and daily adding to the cost of completion and maintenance.

I will say, Mr. Chairman, so far as the general situation is concerned, as I understand Col. Newcomer, the only question in his mind as to the propriety of your acting now is the failure of the railroad company and the city of Petersburg to complete in advance this small work of local improvement. I do not think there ought to be complaint on this head, if you will permit me to say so, when the railroad company, through its accredited officers, stood ready to begin work at any time; and when the city authorities made unanimously, and with alacrity, the appropriation asked for to complete the work and did actually complete three-fourths of it when they found that the Government's appropriation had failed. When it is remembered that the work on the part of the city was expensive, and of absolutely no service to the city, except as related to the Government improvement to follow, certainly no reasonable mind would be disposed to criticise the city for suspending this work, when it was known that no appropriation would be available for completing the Government work. It would be an unreasonable waste to let the situation stay as it is; to have this channel, which has been dredged at great expense to the Government, filled up by repeated washings from the river coming on daily and hourly. If suffered to remain as it now is, there can be but one result, and that is that that channel, upon which you have already spent over \$800,000, will continue to fill up by natural deposit so that, when work is resumed ultimately, it must need be at greatly increased cost.

Mr. Chairman, I have with me the secretary of the Chamber of Commerce of Petersburg, a member of the board of aldermen, gentlemen who are interested in navigation there, connected with the boat companies, to answer any questions that you gentlemen may choose to ask them of a practical nature. I know of no reason why this appropriation should not be included as it was in your last bill. The whole item did not constitute one-eighth of 1 per cent of the appropriations made in your last river and harbor bill; and to save an investment of nearly a million of dollars it does not seem to me to be

unreasonable to ask you now to appropriate a sufficient fund to finish this work. I can assure you, without shadow of a doubt, that both the railroad company and the city will not only be ready to complete their work, but, so far as the city is concerned, complete it ahead of time.

I know that the Norfolk & Western Railroad is ready to go on with the work whenever the Government says it shall do so, and I know that the city of Petersburg, through its city engineer, is ready to go to work, under the direction of the War Department, if that be required.

The CHAIRMAN. Now, Judge, suppose the gentlemen you present confine themselves largely to the urgency of this work. We have from the reports of the Engineers and this later report of Col. Jervcy the information as to the character of the work to be done and estimates of the cost, and we know the amount necessary to be appropriated.

Mr. WATSON. Mr. Chairman, have you any later information than that report of Col. Jervcy of 1916?

The CHAIRMAN. Nothing except what is contained in the annual report.

Mr. WATSON. I want to say this to the chairman. I am glad you mentioned it. Col. Jervcy's estimate for the completion of that dam was \$40,000, based on the labor market at that point in 1916 and on the cost of material. I have not any information as to the possible increase in the cost of construction, but I think, as a matter of common knowledge, we may say that the cost of labor and material has increased since 1916. I just want to suggest that to the committee.

The CHAIRMAN. Well, in view of that, the committee can ask the Chief of Engineer's Office to communicate with the district engineer, with a view to ascertaining whether he wishes to revise his estimate.

Mr. WATSON. Yes, I think that would be well, Mr. Chairman.

One other thought, and I am through, sir. If any anxiety is felt on the part of the committee—and I do not see why there should be as to the action of the local people (our community has already spent twice as much as the Government has spent, and I do not think they would haggle over a few thousand dollars), but if any anxiety should be felt on that point, I would like to remind the committee that the expenditure the Government made would be entirely under the direction of the War Department, and, of course, the War Department would not construct a dam there, or do work, unless the local work had already been finished to a stage which would be satisfactory.

The CHAIRMAN. The last report of the Chief of Engineers, on page 523, under the title, "Local cooperation," states that between 1866 and 1912 the city of Petersburg has voluntarily expended \$1,582,837 on improvements of the Appomattox River.

Mr. DUPRÉ. Judge, is the Dupont plant to which you made reference the one generally known as the Hopewell plant?

Mr. WATSON. Yes, sir; at the mouth of the river.

Mr. DUPRÉ. And the cantonment you refer to is Camp Lee?

Mr. WATSON. That is right, sir.

The CHAIRMAN. As before stated. I would suggest that the other gentlemen whom you wish to present confine themselves to the

urgency of this project. You can well understand the desire of the committee to restrict this bill to appropriations for those improvements, which are especially urgent.

Mr. WATSON. Yes, sir; I understand that, Mr. Chairman.

I now have the pleasure to introduce to the committee Mr. William M. Martin, secretary of the Chamber of Commerce of Petersburg, who will speak as to the urgency of the situation.

STATEMENT OF MR. WILLIAM M. MARTIN, SECRETARY CHAMBER OF COMMERCE, PETERSBURG, VA.

Mr. MARTIN. As I understand it, you would like to have me refer to the reasons why this improvement is needed at this time?

The CHAIRMAN. Yes; and why it should not be postponed.

Mr. MARTIN. Well, the first reason I would give would be this: There is a great deal of traffic between Richmond and Petersburg. Until about two months ago a large part of that traffic was handled by the Furman line of steamboats, which made daily round trips between Petersburg and Richmond. About two months ago, on account of the fact that the channel had so filled up that the boats could not be navigated, the company abandoned this line. Under the previous arrangement deliveries of freight between Petersburg and Richmond were made daily. A boat would leave Petersburg in the morning, deliver freight in Richmond in the middle of the day, and leave there in the afternoon and get to Petersburg that night.

The CHAIRMAN. It might be well to state here that the Appomattox River flows into the—

Mr. MARTIN. Flows into the James 7 miles below Petersburg.

The CHAIRMAN. At Hopewell?

Mr. MARTIN. At City Point. Hopewell is just a short distance from City Point, between Camp Lee and City Point. Camp Lee is 2 miles east of Petersburg, also on the river. It now takes from a week to 10 days to get freight delivered from Richmond to Petersburg, and, of course, an equally long time to the camp. I would say that a considerable volume of business is done between the camp and Richmond, as well as between the camp and Petersburg.

Second, I would like to read a statement by the representatives of the Arundel Sand & Gravel Co., which owns practically inexhaustible deposits of sand and gravel just below town. That gravel is shipped to Petersburg by barges, when it can be shipped. The Government had a contract with this company for 20 carloads of sand and gravel a day, for use in the construction of the dry docks at Norfolk Navy Yard. This is brought in barges to Petersburg, and then shipped by way of the Norfolk & Western Railroad. Now, the reason that is done is that the saving in time is the difference between 12 hours and 36 hours.

Furthermore, it is very difficult to get tugboats to do anything at this particular stage of the game; almost all boats of that kind are hard to get. The output of this company is commandeered by the Government, for use by the Government contractors in the naval dry dock, the aviation field, and other works on the coast. I will say there is no deposit of gravel nearer Norfolk than Petersburg, and that is the most accessible supply. There is no gravel at Norfolk, and that is the reason they have to come to Petersburg.

Now, this statement was prepared a few days ago, at my request, by Friend & Co., who represent the Arundel Sand & Gravel Co. at Petersburg, because the president of the company is also in the coal business, and he was afraid to go away from his office but a few hours at a time. He has a large coal business, and that is the reason he could not be here himself.

The CHAIRMAN. Suppose you make a brief statement of the letter, and put it in the record?

Mr. MARTIN. Well, it is pretty well boiled down. It would take but a short time to read it.

(Mr. Martin thereupon read the letter referred to, as follows:)

PETERSBURG, VA., January 16, 1918.

Mr. W. M. MARTIN,
Secretary Chamber of Commerce, Petersburg, Va.

DEAR SIR: Replying to your inquiry of this date in regard to the traffic on the Appomattox River for the fiscal year ending June 1, 1917, we beg to say that during that period we received by water approximately 75,000 tons of sand and gravel, which was shipped from the Arundel Sand & Gravel Co. from its plant located about 6 miles below Petersburg on the Appomattox River. On account of the sand bars existing in the main channel of the river between Petersburg and the Arundel Sand & Gravel Co.'s plant, our receipts were considerably smaller than they would otherwise have been. By reason of the existence of the sand bars, it was impossible for the company to use the river except at high tide. Additional delay was caused by the fact that on account of the large deposits of sand in the harbor, we were unable to unload except at high tide.

The capacity of the Arundel Sand & Gravel Co.'s plant is approximately 40 carloads of 50 tons each per day. The company is under contract to furnish for use by the Navy Department in constructing the new concrete dry dock at the Norfolk Navy Yard, and other Government work, approximately 1,000 tons, or 20 carloads, a day. We are also under contract to furnish the E. I. du Pont de Nemours & Co. 100 carloads of sand and gravel for immediate use, and this is their logical market for sand and gravel.

The entire output of the Arundel Sand & Gravel Co.'s plant here has been commandeered by the Government for use either by the Government or by munition factories, but on account of the condition of the river, we are unable to make prompt deliveries.

We are also unable on account of the existing condition of the river to supply the demand for sand and gravel needed by the city of Petersburg for the construction of schools and other public buildings. As some of the barges used by the company, when loaded, draw between 8 and 9 feet of water, a minimum depth of 9 feet would be required for us to be in a position to make prompt deliveries.

In former years our company received large quantities of coal, cement, and brick by the Appomattox River, but on account of the filling up of the main channel by sand, we have been compelled to resort to rail shipments exclusively. In case the Government should provide a minimum depth at low tide of 9 feet, we would be in a position to handle this business by water, and our company would be in a position to handle approximately 300,000 tons annually, or approximately three and a half times as much tonnage as was handled at the port of Petersburg during the calendar year 1916, and more than six times as much as was handled during the calendar year 1915.

Very truly, yours,

FRIEND & CO. (INC.),
By THOMAS WHYTE,
President.

Mr. MARTIN. I do not know whether it is necessary to refer any more to the sand and gravel situation, except I should say, as Judge Watson has said, that anthracite coal could be hauled to Petersburg from Baltimore, and cement could be hauled from Hudson River points to Petersburg, brick could be hauled up the river, but now

they cannot be hauled, and, looking at it from the other end, there would be an enormous increase in the lumber shipments out of Petersburg, which does a very large lumber business.

Now, in the next place, there is the fertilizer situation. We have three large fertilizer factories in Petersburg, the Virginia, Carolina & Mexico Co., the Pocsmoke Guana Co., and the W. H. Camp Co. These companies, gentlemen, during the last twelve months, have not been able to get their raw materials in by water. They have used between 500 and 600 carloads of raw material, which heretofore has been brought in by water, and none of which they can bring in now. There is a representative of one of those companies here, who tells me that last year he did not get a pound of raw material by water, and if this project had been completed, he would have been able to do it. I would like to refer to the fact that the Furman line of steamboats had to be taken off, which handled the sand and gravel and fertilizer and general merchandise business.

Of course, Camp Lee, which covers an area now of approximately 8,700 or 8,800 acres, including a rifle range, and not including the cannon range, for which the Government is now negotiating, and contains about 32,000 men. They have a frontage of probably a mile on this river, and they have not been able to have a pound of freight delivered to them by water, and the water is there for a frontage of a mile. It is true that the camp has extraordinarily fine railroad facilities.

Mr. WATSON. It is also true that the railroad is very congested.

Mr. MARTIN. I do not believe there is a road in the South that is better prepared to handle the business that is offered to it than the Norfolk & Western Railroad. The Norfolk & Western Railroad has a main line on the west side, a double-track line on the north side, 12 miles of track from the camp connecting with the main line. Incidentally I will say that the railroad company has spent about \$300,000 on railroads, for which the Government has not been called on to pay a cent, but that is beside the mark.

But I will also say that the War Department has recently decided to locate a camp of engineers down the Potomac some 20 miles, and I do not think I betray any confidence at all when I say that they would have very favorably considered locating that camp at Petersburg, if they had been sure that they had water transportation. The site was recommended by Maj. Gen. Crunkhite, who was in command of Camp Lee, and also by Col. Spaulding, the division engineer, but the fact that the river was blocked so that commerce could not get in, made it undesirable that either Camp Lee or the engineers' camp should be located there, although I will say that the Government did locate an engineer officers' training school at Camp Lee, which I am informed is the only one in the East, and then the ordinary camp.

Mr. KENNEDY. Is there any boat line operating now outside of the sand barges?

Mr. MARTIN. No; the boat line had to be taken off two months ago.

Mr. KENNEDY. You just had one boat line?

Mr. MARTIN. Yes, sir. The company owned three steamers, and the representative of the company is here.

Mr. FREAR. How far did that line run, how many miles?

Mr. MARTIN. It used to run between Petersburg and Richmond, making daily round trips every day.

Mr. WATSON. Fifty miles over and fifty miles back.

Mr. FREAR. This project is 11 miles, about?

Mr. WATSON. This project is just about 11 miles, you understand, but most of the traffic is on the James River.

Mr. FREAR. Yes; I understand.

**STATEMENT OF MR. JAMES M. DAVIS, SECRETARY THE FURMAN
LINE, PETERSBURG, VA.**

Mr. DAVIS. Mr. Chairman and gentlemen of the committee, the proposition is just this. This is war transportation. This is to relieve the railroads. The river is not in a condition. There are 50,000 soldiers to feed and clothe, and gravel boats to help build fortifications, and they can not use anything but a lighter, a 25-yard lighter. We want to relieve that situation. It takes a paltry sum, or a very little sum, I would say, to relieve the situation. We have got the Norfolk & Western straight, we think. We know we have got the city of Petersburg straight, and we are asking you gentlemen to put this thing through, to relieve the situation. It is a bit of patriotism, it is a bit of civic pride, and it is a bit of preparedness. These other gentlemen have said everything else that I might say, gentlemen.

Mr. MARTIN. I would like now to have the pleasure of introducing to you Mr. J. Westmore Brown, one of our city councilmen.

**STATEMENT OF MR. J. WESTMORE BROWN, CITY COUNCILMAN,
PETERSBURG, VA.**

Mr. BROWN. We consider that this work is under way. Judge Watson came before the committee possibly a little less than a year ago, and I understand that the reason why the committee did not approve of this work at that time was because of the fact that the city had not done its part of the work. The Finance Committee at once recommended an appropriation, which was figured out by the city engineer, and that appropriation was made, and we have completed already about 75 per cent of the work. The other work is a very small matter. We consider that we have got to do our part of the work, and if the dam were built, we could not refuse to do it, for our own self-protection. We have got to do the work; there is no question about it. We consider the work under way, and we consider we must do this work. It would be unnecessary and absolutely unnecessary to do this work unless the dam is built, but if the dam is built, we consider that we would have to do it for our own protection. There is no question in the world in our minds but what we will do it. We have undertaken the work.

Mr. FREAR. Has that offer been made to the Army Engineers?

Mr. BROWN. I think you should understand that we made this appropriation over a year ago, and we undertook to bottle up this stream and to keep it from flowing into the river, but by the time we did that your Congress adjourned and failed to pass this bill. The railroad, as I understand, is prepared to do their work at any time it has to do it.

Mr. FREAR. Did they notify the Army engineers?

Mr. BROWN. As Mr. Martin read in the statement.

The CHAIRMAN. The Army engineers further state that they wish the railroad to do their work contemporaneously with the Government.

Mr. BROWN. That is all I have to say from the standpoint of the city of Petersburg, and you should have no hesitancy, as far as we are concerned. As Mr. Watson, I believe, stated, the matter is nothing but a matter of engineering, and the city is prepared to do its part of the work. We have already done two-thirds or three-fourths of what we had to do, and we would have continued but for a peculiar condition which existed down there. We had a nasty situation in regard to labor and material, and particularly as to labor. We consider the work under way. We had a meeting of the finance committee night before last, and the committee has instructed me to say to you gentlemen that we consider the work under way, and there is no question as to our doing it.

I am not prepared to answer as to the question of the urgency of this matter, but as I view it, it is possibly a little different from the statements made here before. Since the Government undertook to divert this stream and make a channel in the river the conditions ever since that time have grown worse, and the channel is in a far worse condition to-day than it was before you undertook this work; simply because the work was not completed.

Mr. FREAR. There is no amount provided for the maintenance of this project now?

Mr. BROWN. None for the last 18 months. I think your Army engineers have charge of that, and the department considered that it would be a waste of money to dredge the river as it stands now.

Mr. MARTIN. I would like to add to my statement about the companies down there that I have just been informed by the city engineer that the Bickford Sand & Gravel Co. is now prepared to do business a short distance below Petersburg, in sand and gravel, and I am informed that they propose to do three times the volume of the business that the Arundel Sand & Gravel Co. is doing.

I would also like to submit a letter from Mr. J. E. Crawford, chief engineer of the Norfolk & Western Railroad Co., Roanoke, Va.

(The letter referred to is here printed in full, as follows:)

NORFOLK & WESTERN RAILWAY Co.,
Roanoke, Va., February 7, 1917.

Mr. WILLIAM M. MARTIN,

Secretary Chamber of Commerce, Petersburg, Va.

DEAR SIR: Replying to your letter of January 30 in regard to flood-defense work at Petersburg:

Our company is willing to meet the wishes of the War Department and start work raising our tracks as soon as the War Department starts work on its part of the improvement.

Yours, truly,

J. E. CRAWFORD,
Chief Engineer.

Mr. MARTIN. I am further assured by Mr. Crawford orally, within the last six weeks, that they are at liberty to do whatever the Government wants them to do.

Mr. FREAR. What is the average amount of money they have asked for, for that work?

The CHAIRMAN. \$40,000 for the project, and \$10,000 for maintenance, but it was suggested that, due to the increased cost of material and labor, that estimate should be revised.

Mr. FREAR. Do you know, Mr. Chairman, why the \$26,000 which is available has not been used? Has Col. Newcomer said anything about it?

The CHAIRMAN. Because of this damage to the stream in 1912, by reason of the silt and other material which is constantly getting into this channel, the engineers not deeming it to the best interests of the Government to waste this money in dredging this channel.

Mr. FREAR. But they have the money to do it, though?

Mr. KENNEDY. Why did they ask for \$26,000 in the last bill, and we gave it to them?

Mr. WATSON. That was not for the Appomattox River.

Mr. KENNEDY. The two go together.

Mr. WATSON. You are talking about a different bill entirely. You are reading the general river and harbor bill and that bill over there is the emergency bill of the extra session.

Mr. KENNEDY. This is the bill for 1917.

Mr. WATSON. That is the extra session.

Mr. KENNEDY. It has got the James and Appomattox Rivers together, and we gave them \$26,000 for continued improvement of the James River, and \$46,000 in addition.

Mr. WATSON. Mr. Chairman, I may say in that connection that that \$26,000—I suppose I would not err in saying that \$20,000 of it will be for the James River and Beacon Creek. The Appomattox would be only incidentally connected with it, and no considerable portion of it was ever intended for the Appomattox.

Mr. MARTIN. The extra session of Congress appropriated \$10,000 for maintenance. That is available today, and has not been spent by the Engineers' Department.

Mr. FREAR. There is \$20,000 available.

Mr. WATSON. Mr. Frear, there is \$10,000, unexpended balance, of the general improvement fund. Five thousand and some odd dollars are unexpended on this river. Both funds were mentioned together in the emergency act, the greater part of it being for one purpose and a small part of it being for another.

The CHAIRMAN. Mr. Kennedy, you understand, of course, that while this appropriation of \$26,000 for maintenance was carried in the last bill for the James River and the Appomattox River and Beacon Creek, that the actual expenditure was on Beacon Creek—

Mr. KENNEDY. And on the James River?

The CHAIRMAN. For that year there was only an estimate of \$5,000 for the maintenance of the Appomattox River, and that has not been expended, for the reasons stated.

Mr. WATSON. Only \$705 has been expended, I think.

The CHAIRMAN. A small amount of it.

Now, Judge, I suppose the statements of these other gentlemen would be merely cumulative?

Mr. WATSON. They would be corroborative, I think, sir.

Mr. MARTIN. We do not think it is necessary to say anything further, but, of course, we will all be ready to answer any questions you would like to ask us.

I would like the record to show that the other gentlemen here present to advocate this project are: Mr. L. Smith Acree, president, W. H. Camp Guano Co.; Mr. Robert D. Budd, city engineer, Petersburg, Va.; Mr. William Koenig, president board of aldermen of Petersburg.

The CHAIRMAN. Judge Watson, we are glad to have heard you. You have made a very fair presentation of the matter, and the committee will certainly take it under consideration. Are there any questions that any member of the committee would like to ask any of these gentlemen?

Mr. WATSON. Mr. Chairman, I want to thank you on behalf of these gentlemen and myself for the time you have given us and for your courteous hearing.

I would like the record to show that Mr. Koenig, the president of the board of aldermen, concurs in the statements made, and feels satisfied with the presentation we have made.

(Whereupon, the committee proceeded to the consideration of other business.)

3-

BEVERLY HARBOR, MASS.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF BEVERLY HARBOR, MASS.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

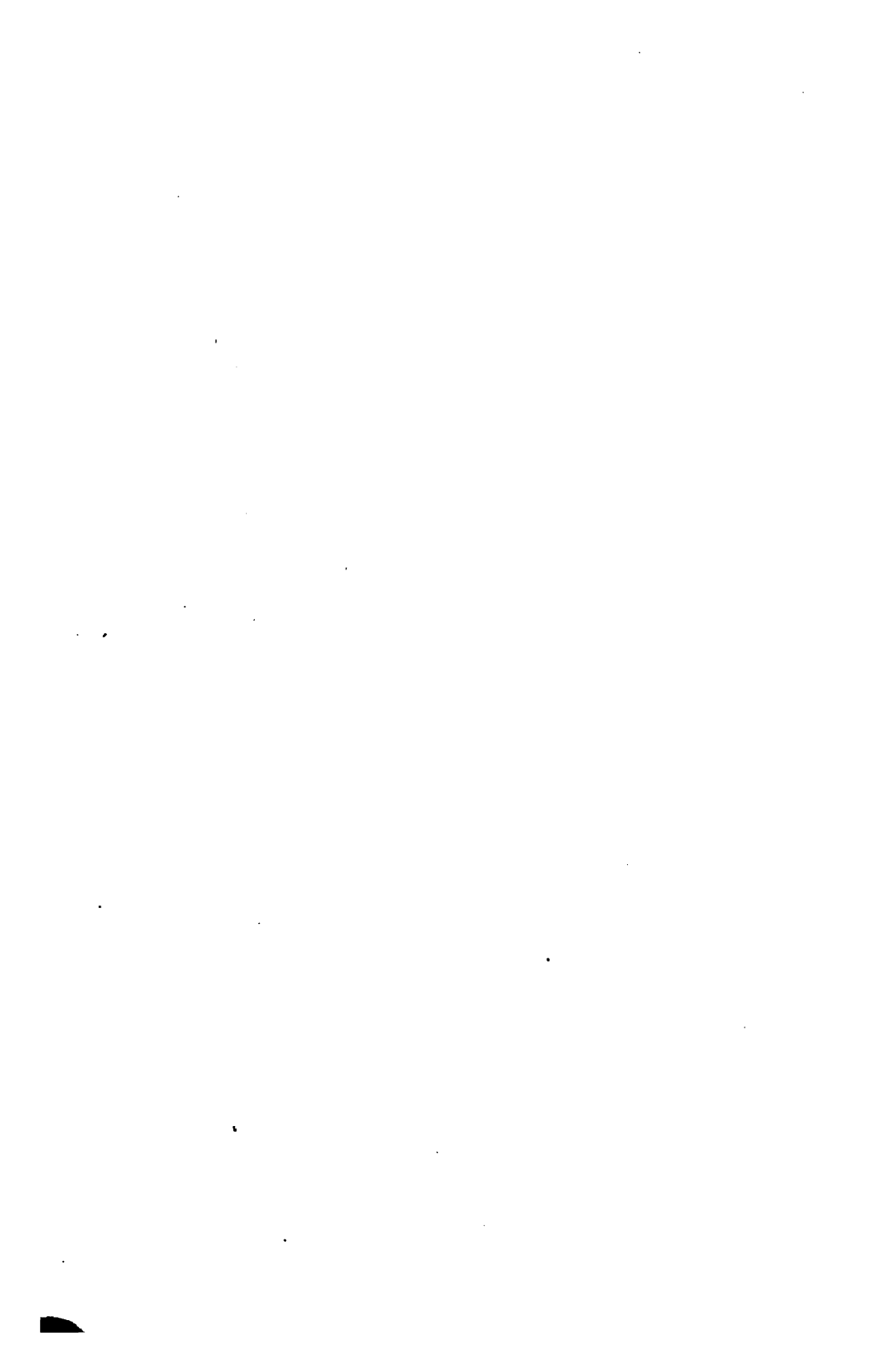
CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 19, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918



BEVERLY HARBOR, MASS.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Saturday, January 19, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order. Gentlemen, we have Representative Lufkin and a delegation from Beverly, Mass., who wish to present a new project for the improvement of Beverly Harbor.

Mr. Lufkin, the committee will be glad to hear you now. May I suggest that at the beginning you state in a brief way what the project is, and give the official number of it?

STATEMENT OF HON. WILLFRED W. LUFKIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS.

Mr. LUFKIN. The last recommendation, Mr. Chairman, of the Board of Engineers on this matter is contained in Document No. 220, Sixty-third Congress, first session.

The CHAIRMAN. And then that was supplemented by Rivers and Harbors Committee Document No. 8, Sixty-third Congress, second session?

Mr. LUFKIN. With regard to the local improvements by the city, was it not?

The CHAIRMAN. Yes.

Mr. LUFKIN. The delegation here this morning will confine itself absolutely to urging the adoption of this project as a war measure. Beverly Harbor was improved by the Government in 1908, and a channel 18 feet deep provided at that time; but subsequently there was constructed at the mouth of the harbor the largest coal pocket on the Atlantic coast east of Boston, and there has also been constructed in recent years one of the largest oil-distributing plants.

The CHAIRMAN. The members of the committee will find this existing project discussed on page 90 of the annual report.

Mr. LUFKIN. With the establishment of these two plants, and the increase in the size of ships necessary to supply them, the old project of an 18-foot channel was found entirely inadequate. Consequently, in the river and harbor bill of July, 1912, there was a provision for a survey by the Board of Engineers, providing for a 24-foot channel, in the place of the present 18-foot channel. The engineers reported that this project was worthy of consideration, and recommended its probable cost as \$173,000. They also recommended that the United States Government should appropriate \$123,000 of that amount, and

the Commonwealth of Massachusetts \$50,000. The engineers, moreover, recommended that the city of Beverly, in connection with this proposed improvement, should provide a public wharf and certain other improvements, at an estimated cost, I think, of \$25,000. The project, so far as the United States Government is concerned, was incorporated in the subsequent river and harbor bill, which, however, failed of passage in 1914, on account of the Senate amending it by providing a lump appropriation for certain work specifically recommended by the War Department. I think my memory is correct on that. In the meantime the local people had taken the matter up with the Massachusetts Legislature, and the State body at once provided \$50,000 as their share of the cost of the improvement, and also passed a bill authorizing the city of Beverly to expend \$25,000 as their share, so that those two appropriations are still available.

There is one trouble, however, in connection with the State appropriation. Under our statutes, a State appropriation unexpended at the expiration of three years lapses, so that in 1916, Congress in the meantime not having acted on the matter, the Beverly people went before the Massachusetts Legislature again and were successful in having them extend their appropriation for three years more, which will now expire in 1919. There is some question in the minds of this delegation whether the legislature would continue to grant another extension, however, in view of the fact that this money will have been lying idle for six years, and just at the present time the increased demands upon our State for appropriations incident to the war are very heavy.

Now, the reason why we are pressing this matter at this particular time is this: Beverly Harbor is not now, and never will be, a harbor of refuge to any extent, and there probably never will be any general shipping there. It is purely and simply a port of distribution of coal and oil, and even with a 16-foot channel they are distributing coal, from their pockets there, to all parts of New England.

The CHAIRMAN. You refer to the 16-foot channel. The existing project is 18 feet.

Mr. LUFKIN. Yes; at the present time it is 18 feet. I beg your pardon.

Mr. DEMPSEY. And it is proposed to make it 24?

Mr. LUFKIN. Yes, sir. They are to-day, when they can get coal, sending it all over New England from those pockets there, and it is the same with oil. As a matter of fact, they supply, I think, all the oil used at the Boston Navy Yard. They supply all of the coal used at the United Shoe Machinery plant, which is located in Beverly, and which is to-day making all of the machinery for the harness for the United States Army, and probably all machinery for the Army and Navy shoes, and other things of that sort. They also supply all the oil, and a great deal of the coal, used in the neighboring city of Peabody, which is to-day manufacturing a great amount of the leather, etc., being used in the construction of those Army shoes.

The CHAIRMAN. You refer to the distribution of oil. That is petroleum and its products?

Mr. LUFKIN. They distribute gasoline, fuel oil, kerosene, and lubricating oil, I think all of those—but there is a representative of that concern here who can answer any questions on this point.

Mr. DUPRÉ. Where does the oil mainly come from?

Mr. LUFKIN. From Texas—Port Arthur.

Now, the gentlemen here from Beverly will present, among other indorsements, one from the commandant of the Boston Navy Yard, urging the necessity of the immediate improvement of the channel, from the standpoint of the Navy.

Moreover, Col. Frederic V. Abbot, United States Army, who for some years was the district engineer officer in New England, also wrote a letter to one of the business concerns in Beverly, in which he stated that with the large coal and oil stations located there, and in view of the fact of their being so close to the open ocean, with well protected ports on the waters of Salem Harbor, that this project is a matter of considerable importance to the United States Navy. That was before the war that that letter was written, and to-day the importance of the project has increased a very great deal.

Now, the mayor of Beverly, the Hon. James McPherson, is here at the head of the delegation from that city, and I am going to present him to you. The mayor will submit indorsements from several large organizations and corporations interested in this improvement, and will also tell you what the city of Beverly itself is willing to do in this matter.

Mr. DEMPSEY. Where do you get your coal from? You get oil, you say, from Texas. Where does the coal come from?

Mr. MCKAY. The coal comes from southern ports.

Mr. DEMPSEY. Norfolk, largely?

Mr. MCKAY. Norfolk, Newport News, Lamberts Point, and all those other shipping ports on the Chesapeake.

The CHAIRMAN. They get practically all of the bituminous coal from the coal terminal of the Norfolk & Western at Lamberts Point, Va.

Mr. FREAR. What draft is there there now?

Mr. LUFKIN. About 18 feet.

Mr. FREAR. The report says there are 24 feet in there now.

Mr. MCKAY. There is a high rise and fall of the tide, nearly 10 feet. These vessels drawing up to 25 feet go in at high tide, and then there is an excellent accommodation at the coal wharf and the oil wharf for unloading, irrespective of the tide, so they go on the high tide and unload, and go out on low tide.

Mr. FREAR. Have you any public wharves there now?

Mr. LUFKIN. They have a project to provide them, I believe.

Mr. FREAR. The statement says there are no wharves there at the present time but private wharves.

Mr. LUFKIN. Before the mayor proceeds, I want to quote from a letter I received from a Beverly coal concern in 1916, just about two years ago:

Only last Friday, when the supply of coal was very low, a vessel with about 7,000 tons of coal had to anchor outside of the harbor on account of there not being sufficient rise of tide to bring her into Beverly. That was extremely discouraging, owing to the great shortage of coal that everyone is experiencing this winter.

Mr. FREAR. The project that has just been urged for Stamford provides for a depth of 12 feet, and their commerce is over 400,000 tons, which is largely of coal.

Mr. LUFKIN. It comes in barges, I suppose. These are all large steamers. During an unusual rise of tide last winter they had two large steamers go aground, and they had a great deal of difficulty getting them off.

STATEMENT OF HON. JAMES McPHERSON, MAYOR OF BEVERLY, MASS.

Mr. McPHERSON. Mr. Chairman, and gentlemen, I have been delegated to come here by the city government of Beverly to make you gentlemen aware of the local conditions. We have other representatives here, Mr. Robertson, who will follow me, is the representative of the local business men and the board of trade. He has previously spoken to your committee on other occasions, on these matters, and is more familiar with the subject than I am, but I have an order here, presented by the board of aldermen, stating that they stand ready to do their part, or what they agreed to do, provided the National Government will make its appropriation. I might state that there are several concerns that are using oil exclusively in our district, and also manufacturers who are using coal, that are depending a good deal upon the local distributing plant to receive their oil and coal. We have 18 feet of water there at the present time, and the large vessels that come from Texas direct, and the barges that come from Newport News and points in the south, are growing larger and larger every year.

I will state, gentlemen, that I have a letter here from the commandant of the Boston Navy Yard, Commandant Rush, who writes in response to my inquiry on this question as follows:

BOSTON NAVY YARD, OFFICE OF THE COMMANDANT,
January 16, 1918.

From: Commandant, Boston Navy Yard, first naval district.

To: Hon. James McPherson, mayor of Beverly.

Subject: Proposed dredging of ship channel entrance to Beverly, Mass.

I beg to acknowledge receipt of your note of January 15, stating the proposition which you propose to bring before Congress at an early date, for the dredging out of the 18-foot entrance into Beverly, and straightening it into a 24-foot channel at low water.

The matter has been gone over carefully in this office and considering the existing difficulties regarding the distribution of oil and fuel at this time of war, it is believed that the advantages gained are well worth the expenditure of \$125,000.

Moreover, this is a project, in the opinion of the first naval district, which should not be delayed for one moment, and if you think the opinion of the officers of the district would have any weight, you are very welcome to quote it.

Wishing you success, and hoping for an early action in the acquirement of this fine ship channel, I am,

Very sincerely, yours,

W. R. RUSH,
Captain Commandant.

I have several other recommendations, but as I do not wish to delay or bore the committee, I will simply leave these recommendations for your consideration.

The CHAIRMAN. They will be printed in the record.

(The letters referred to are here printed in full as follows:)

RESOLUTION PASSED BY BEVERLY BOARD OF TRADE IN MEETING HELD AT BOARD ROOMS JANUARY 16, 1918.

(Robert Robertson and Wentworth Schofield appointed as a committee to represent the Beverly Board of Trade at Washington, D. C.)

Whereas in 1914 there was an earnest movement of Beverly business men to get the channel in our harbor widened and deepened so that larger coal steamers and oil-carrying steamers could reach the docks of the New England Coal Co., and the Gulf Refining Co.; and

Whereas there has been appropriated by the State of Massachusetts \$50,000, which is still available, and by the city of Beverly \$25,000, which is still available, and have asked for another appropriation of \$125,000 from the National Government. The bill passed the National House, but was killed in the Senate; and

Whereas conditions in Beverly Harbor are such that the depth of water renders the handling of such vessels somewhat unsafe and far from economical: Be it

Resolved, That since Beverly is practically the only port on the Massachusetts coast outside of Boston which can carry so great a depth of water to its wharves with the expenditure of so small a sum of money, thus giving opportunity for extensive future development for Beverly on a large scale, the Beverly Board of Trade hereby gives its unqualified indorsement to the project which is being agitated for deepening the present channel into Beverly so as to carry 24 feet at low water; also, to widen the channel in the harbor on the northern side by removing the ledge near the Essex Bridge; that copies of this resolve be sent to Congressman Lufkin, Senators Lodge and Weeks, and the Committee on Rivers and Harbors, and to such other parties as it may seem advisable, with the request that they do all in their power to favor the proposed action.

GEORGE H. VOSE,
President.

RALPH E. JOHNSON,
Executive Secretary.

A true copy.

RALPH E. JOHNSON.

BEVERLY, MASS., January 17, 1918.

At a meeting of the planning board of the city of Beverly, Mass., on Friday, January 11, 1918. It was voted to respectfully ask the Committee on Rivers and Harbors to favorably report on an appropriation for the improvement of Beverly Harbor and urge that the Houses of Congress give the same favorable action for the following reasons:

First. The deepening and widening of the channel would greatly facilitate the uses of the present coal pockets and oil depot (which distribute coal and oil throughout the district), thereby facilitating the movement of the necessities of life and industry to the surrounding district.

Second. Thereby increasing the prosperity and usefulness of the city itself.

Third. Insuring a constant supply of coal, oil, etc., to manufacturers doing Government work, directly and indirectly.

Fourth. Increasing the available water frontage for more shipping facilities, such as warehouses, wharves, etc.

Respectfully submitted.

BEVERLY PLANNING BOARD,
By AUGUSTUS P. LORING, Jr.,
Chairman.

BEVERLY, MASS., January 14, 1918.

Resolved, That the board of aldermen of the city of Beverly, Mass., hereby wish to be recorded as in favor of the recommendation of an appropriation for the improvement of Beverly Harbor. The grounding of some of the coal and oil steamers entering the harbor clearly shows that some improvement is necessary, that coal barges and vessels of a deeper draft may enter without damage and thus afford better facilities for the distribution of coal to a portion of Essex County and oil to New England. And it is further

Resolved, That if the appropriation is passed the board of aldermen will do all in its power to meet the obligation imposed in chapter 321, acts of 1914, of the laws and resolves of Massachusetts.

GEORGE W. McNUTT.
EDWARD THOMPSON.
C. ARTHUR FOSTER.
PAUL S. EATON.
THOMAS D. CONNOLLY.

GEORGE P. IRVING.
WILLIAM MARSHALL, Jr.
JOHN L. HANNERS.
J. R. DRUGAN.

A true copy.

LUTHER S. STERRICK, *City Clerk*.

UNITED SHOE MACHINERY CORPORATION,
Boston, Mass., February 5, 1918.

The CHAIRMAN COMMITTEE ON RIVERS AND HARBORS,
House of Representatives, Washington, D. C.

DEAR SIR: The business men of Beverly are moving earnestly to secure the widening and deepening of the channel in their harbor so that larger coal steamers and oil-carrying steamers can reach the docks of the New England Coal Co. and the Gulf Refining Co. The State of Massachusetts has appropriated \$50,000 which is still available and the city of Beverly has appropriated \$25,000 which is still available. They are now asking for an additional appropriation of \$125,000 from the National Government. The bill has passed the House of Representatives once, but got no further.

The United Shoe Machinery Corporation, which is the leading industry of Beverly, is deeply concerned in advancing this movement. A broader and deeper channel will not only be of great advantage to the city but it will be of national advantage on account of the industries now carried on in Beverly which are of importance in the present national crisis.

At present coal used at our factory is landed at the New England Coal Co.'s wharf and then delivered by truck. To widen and deepen the channel will enable boats of larger cargo capacity to reach the wharf and will greatly facilitate the matter of delivery. We buy our gasoline and fuel oil from the Gulf Refining Co. and this also increases our interest in having the channel widened and deepened so that vessels of larger carrying capacity can reach their wharf.

In Beverly is one of the most complete coal plants to be found on the Atlantic coast. It is the only plant east of Boston where large barges can be handled without demurrage charges and from thence is distributed coal to Salem, Peabody, Danvers, Lowell, Lawrence, Ipswich, and other places in Essex County. The city is a center of large manufacturing population, and many of the plants are making munitions of war and equipments for the Army and Navy.

The reasons in detail for this improvement will be presented to the committee by others, but the United Shoe Machinery Corporation, being vitally interested, joins heartily in the efforts which are being made. Army engineers who have examined the project are entirely favorable to it.

Yours, very truly,

L. O. COOLIDGE.

DANVERSPORT, MASS., *January 15, 1918.*

MAYOR JAMES MACPHERSON,
Beverly, Mass.

DEAR SIR: We understand that a commission is to be sent to Washington to try and secure money to deepen the channel into Beverly Harbor.

We trust that you will do everything in your power to accomplish this, and that you will do everything to facilitate the shipping of coal into Beverly. We have bought our coal from the New England Coal & Coke Co. for a period of six years, covering the time since we started in business here at Danvers.

We have made leather for Government shoes and are now bidding on leather to go into more Government work which would call for a certain number of feet per day.

You will readily see that if we get this order and should have to shut our plant down it would not only tie us up, but it would also make it impossible for us to make our regular shipments to customers.

Very truly, yours,

WIDEN-LORD TANNING CO.
J. ANDERSON LORD.

BOSTON, MASS., *January 15, 1918.*

HON. JAMES MCPHERSON,

Mayor of the City of Beverly, Mass.

DEAR SIR: Our attention has just been called to a project for the deepening of the channel into Beverly Harbor from 18 to 24 feet. We want to indorse this most emphatically, as we regard it as of the very greatest importance for our own and other industries depending on their water-borne coal supply by shipments into Beverly. It seems obvious that the deepening of the channel will make available a much greater amount of tonnage and be better for all concerned.

As you are probably aware, we have been engaged, since the outbreak of the war, in furnishing large quantities of upper leather for shoes, clothing, and equipment for the allied and United States armies, and this year particularly the most serious hindrance to steady operation has been the uncertainty of our coal supply.

The improvement to the Beverly Channel which you are advocating is now, in our opinion, a war emergency measure, and we have no doubt but that you will convince the authorities and get speedy approval.

Very truly, yours,

A. C. LAWRENCE LEATHER CO.,
A. C. LAWRENCE.

GULF REFINING CO.,
Beverly, Mass., February 4, 1918.

Mayor James MCPHERSON,

City of Beverly, Mass.

DEAR SIR: Referring to the matter of proposed improvements at the entrance to the channel to Beverly Harbor, I would state that this would not only be a benefit for the community but it would place Beverly in a position to bunker Government vessels using oil for fuel, as the Gulf Refining Co. can give wharfage to vessels over 400 feet long, with a draft of 24 feet at low water, and have already installed on the wharf four 8-inch hose connections for delivering oil and could deliver 100,000 gallons, if necessary, in less than two hours.

Before the present war the matter was taken up with this company by the United States navy yard at Boston as to our ability to fuel torpedo-boat destroyers in Beverly, which we were at that time in a position to do; and if the straightening of the channel could be accomplished, it would eliminate the dangers to vessels now existing, the old channel having considerable ledge, which if any vessel should get aground she would be very likely to be seriously damaged.

In addition to supplying the Navy with fuel this company furnishes a great many of the industrial plants, some of them on Government orders, also gas companies by water in Boston, Salem, and Gloucester, and a number of others by rail.

Hoping that the project will be successfully put through,

Yours, very truly,

W. SCHOFIELD, *Superintendent.*

COMMONWEALTH OF MASSACHUSETTS,
COMMISSION ON WATERWAYS AND PUBLIC LANDS,
Boston, January 17, 1918.

THE COMMITTEE ON RIVERS AND HARBORS,

House of Representatives, Washington, D. C.

GENTLEMEN: The commission on waterways and public lands has given consideration to the project now before your committee for the improvement of Beverly Harbor, and is of the opinion that the deeper channel will make it possible for coal and oil to be shipped in larger quantities to the city of Beverly, which, on account of its railroad connections, is an advantageous point for the distribution of these commodities; and that the accessibility of this harbor to the open sea will make it of advantage to the United States Navy. It is, therefore, of the opinion that the project is meritorious and worthy of your indorsement.

Respectfully, for the commission,

JOHN N. COLE, *Chairman.*

COMMONWEALTH OF MASSACHUSETTS,
COMMISSION ON WATERWAYS AND PUBLIC LANDS,
Boston, January 18, 1918.

The COMMITTEE ON RIVERS AND HARBORS,
House of Representatives, Washington, D. C.

GENTLEMEN: In writing a letter to your committee yesterday carrying an indorsement of the project for harbor development in Beverly, Mass., I was not able to give you the data relative to the appropriations which the Commonwealth of Massachusetts has made to help in this work.

In 1914 by special legislation an appropriation of \$50,000 was made, contingent upon the cooperation of the city of Beverly, all to carry out a Federal project for the improvement of Beverly Harbor. Under the law governing appropriations made in Massachusetts, on account of the failure of the city and the Federal Government to carry on this work, this appropriation lapsed in 1916, but under special legislation of that year the appropriation was made available for a period of three years from that time. You will therefore note that the Commonwealth stands behind this project to the extent of \$50,000; that that money will be available until 1919; that the city is pledged to expend for its share of the improvements \$25,000; and that these two pledges indicate very forcibly the interest which the State and the city have in this work.

Since writing you yesterday, further investigation shows that the project has great merit, and this commission desires to assure you of its interest in seeing early action on the part of the Federal Government to carry on the work already approved by your department officials.

Respectfully, yours,

JOHN N. COLE, *Chairman.*

OFFICE OF COUNTY COMMISSIONERS,
Salem, Mass., January 17, 1918.

To the mayor and aldermen of the city of Beverly, Mass.

GENTLEMEN: In the matter of the improvement of Beverly Harbor, about which we understand your honorable board has petitioned the Committee on Rivers and Harbors, at Washington, the matter has been very carefully examined by the commissioners, and I have to advise you that they deeply appreciate the benefits that accrue from the said improvement to your city and the county as well.

They hereby indorse the same and trust that the authorities at Washington will give careful consideration to your petition and recommend an appropriation therefor.

For the commissioners:

MOODY KIMBALL.

BOSTON & MAINE RAILROAD,
Boston, January 17, 1918.

The COMMITTEE ON RIVERS AND HARBORS,
Washington, D. C.

GENTLEMEN: I have been requested by the Hon. James McPherson, mayor of Beverly, Mass., to address you on the subject of the proposed deepening of Beverly Harbor Channel as it affects railroad operation at that point.

This railroad owns no water-front property at Beverly connected by rail, but it does have rail connections with docks owned by the Gulf Refining Co. and by the New England Fuel & Transportation Co. Track connections to these docks is laid through the public streets, and trains are operated under regulations of the city of Beverly, the railroad being permitted to serve these industries under the present regulation between the hours of 1 a. m. and 5 a. m.

The Gulf Refining Co. receives its oil in tank steamers averaging 12 per year, and 2,000,000 gallons per steamer. During the month of October last there were forwarded by that company 290 tank cars and 70 box cars.

The New England Fuel & Transportation Co. forwarded during the month of October last 135 cars tidewater coal, amounting to 3,777 tons.

Under normal conditions the amount of traffic moving via tidewater would undoubtedly exceed the figures given above. Should there be any large increase over the amount of tonnage now handled, it would, of course, be necessary for the city of Beverly to remove or modify the present restrictions as to the hours

during which the trains may be operated over the connecting track between the docks and the main line of the railroad. There are also certain operating features, such as grades and curvatures, in connection with the use of this connecting track which should be improved if any substantial tonnage has to be handled over the present route.

His honor, the mayor, informs me that it is his judgment that the city of Beverly will, in case of the deepening of the channel and an increase in business, provide the necessary facilities and extend the hours of operation so that the handling of such increase in tonnage may be possible and practicable.

It has, of course, been made apparent, particularly during the past two years, that any development that will permit a larger tonnage to be brought into New England by water, especially fuel and oil, is of interest to New England industries and is not inimical to the railroads' interest, but whether this development should be through the port of Beverly as against the other ports served by this railroad is a matter which your committee, with its larger knowledge of the situation, will decide.

Yours, truly,

J. H. HUSTIS.

BUSINESS MEN'S ASSOCIATION,
Beverly, Mass.,

The following was adopted at a meeting of the business men's association held January 17, 1918:

Whereas, the city of Beverly has a great natural commercial advantage in its harbor, located in an advantageous position just inside the roadstead of Salem Bay, forming one of the safest outside anchorages on the coast, the depth of the present channel into Beverly being 18 feet at mean low water; and

Whereas, it is desirable that the great opportunity from commercial development now open to the city of Beverly on account of said great natural advantage should be still further developed in order to obtain the proper result from such money as has already been expended in such development; and

Whereas, Beverly is already the terminal point of a line of steamers of deep draft carrying coal and oil, with the possibility that additions to Beverly's water commerce may be made at any time; and

Whereas, conditions in Beverly Harbor are such that the depth of water renders the handling of such vessels somewhat unsafe and far from economical; be it

Resolved, That since Beverly is practically the only port on the Massachusetts coast outside of Boston which can carry so great a depth of water to its wharves with the expenditure of so small a sum of money, thus giving opportunity for extensive future development for Beverly on a larger scale, the business men's association hereby gives its unqualified indorsement to the project which is being agitated for deepening and straightening the channel into Beverly so as to carry 24 feet at mean low water.

LOUIS S. SMITH, *President*.
BENJ. A. PATCH, *Secretary*.

The CHAIRMAN. Now, Mr. Mayor, before you conclude, will you please state to the committee why, in your opinion, this project is so urgent now that it ought to be included in this bill under war conditions?

Mr. McPHERSON. Mr. Chairman, I think that the great reason is because it is the only oil-distributing plant on the New England coast. The Gulf Refining people distributing oil to the navy yard, the Watertown Arsenal, and the Portsmouth Navy Yard, and they have facilities there for loading ships to the extent of 40,000 gallons of oil an hour. Forty thousand gallons of oil an hour can be put into any of our naval boats, and Commandant Rush thought that was very important. There is only a short length of dredging to be done, about 2,800 feet in length, and the city has been ready to build a public landing place there, for the pump and the dredging material,

and the coal pocket is also a very important point, because it furnishes coal for not only the city of Peabody, an adjoining city to us, but also furnishes coal for the United Shoe Machinery Co., which, as has been stated, manufactures all the shoe machinery made in the country, and with those two objects in mind, we feel as though it is very urgent.

The CHAIRMAN. Mr. Mayor, before you conclude, this report, as modified by the committee report, based upon the resolution of the committee, refers to local cooperation by the construction of a bulkhead and the deposit of soil behind that bulkhead which would guarantee that the new soil or land thus created could be used by the city for the purpose of a municipal terminal.

Mr. McPHERSON. Yes; that is a fact.

The CHAIRMAN. Now, have you any water terminal at present owned by the municipality and for use by the public upon reasonable terms?

Mr. McPHERSON. We have not. Practically all of the water front is owned by private corporations, with the exception of a small landing place, which was used formerly by the ferry before the bridge was constructed between Beverly and Salem. We have several water fronts proposed, but they are used for park purposes altogether.

The CHAIRMAN. This committee are striving to bring about conditions whereby the municipalities will construct public water terminals of a modern character and properly equipped, which we regard, and the public regard, as essential for the full development of water transportation. Has your municipality adopted any plans for municipal terminals?

Mr. McPHERSON. Yes, sir; they have; they have adopted a plan whereby we have over 550 feet frontage.

The CHAIRMAN. Where is that to be located? Just describe it.

Mr. McPHERSON. It is to be located right at the mouth of the inner harbor and parallel with this proposed channel.

The CHAIRMAN. Is that regarded as a feasible location?

Mr. McPHERSON. Yes, sir; very. It is right on the water front; right in the water, so to speak.

The CHAIRMAN. Has the location ever been approved by the engineers? Has it ever been submitted to them?

Mr. McPHERSON. Yes, sir; it has.

Mr. FREAR. The city owns the property?

Mr. McPHERSON. The city owns the property.

The CHAIRMAN. Are there any plans under consideration for the actual construction of a water terminal?

Mr. McPHERSON. Yes, sir; we stand ready to move just as soon as the National Government makes their appropriation. That is where we are to use our \$25,000 to build the bulkhead.

The CHAIRMAN. The municipality proposes to construct a water terminal if this improvement is made.

Mr. McPHERSON. Yes, sir; they have got the authority from the State legislature to spend the \$25,000 for that purpose.

Mr. BOOHER. Mr. Mayor, you said you had facilities there for loading 40,000 gallons of oil an hour?

Mr. McPHERSON. Yes, sir.

Mr. BOOHER. Is that sufficient to accommodate the business?

Mr. McPHERSON. Why, we do not use that amount at this time. That would be used only for loading the naval boats.

Mr. BOOHER. You have got the capacity there, then, to accommodate the naval boats?

Mr. McPHERSON. Yes; at the present time.

Mr. BOOHER. So the ability to fill the Navy order is the reason why this project should be adopted at this session?

Mr. McPHERSON. Yes; the principal one; we need the channel in order to get the naval boats in there.

Mr. DEMPSEY. You need the channel now to get the boats in?

Mr. McPHERSON. The oil boats come in at the present time, like the small coal boats.

Mr. DEMPSEY. You need it for the larger oil boats?

Mr. McPHERSON. Yes, sir; and also the larger coal steamers.

Mr. BOOHER. There are plenty of oil boats that can get into that harbor now?

Mr. McPHERSON. The small boats owned by the Gulf Co.; yes, sir; although the *Gulf Stream* grounded five weeks ago, coming in. It is not the larger boats that are used; it is the smaller boats on that line that come in.

The CHAIRMAN. Mr. Lufkin, we would be glad to hear from the other gentlemen.

Mr. LUFKIN. As an example of the amount of oil business there, and the importance of it, I am informed that they supply all the oil for the Consolidated Gas Co., which lights the city of Boston.

I want to present Mr. Robert Robertson, who is the chairman of the Beverly Harbor improvement committee, and who, I think, has probably more real facts than all the rest of us put together.

STATEMENT OF MR. ROBERT ROBERTSON, CHAIRMAN HARBOR IMPROVEMENT COMMITTEE, BEVERLY BOARD OF TRADE, BEVERLY, MASS.

Mr. ROBERTSON. Mr. Chairman, I have come down here to be near this map. I appear before you in behalf of a deeper and straighter channel in the harbor of Beverly, Mass.

The city of Beverly, containing about 22,500 inhabitants, lies on the north shore of Massachusetts Bay, between Boston and Gloucester, in the center of one of the country's greatest manufacturing centers.

The outer harbor, protected by a row of islands, furnishes an excellent anchorage ground for all kinds of vessels, and has been used for such purposes by the largest vessels of the United States Navy. We have had three battleships at one time in here, and a large amount of small ships [indicating on map].

Mr. DEMPSEY. Indicating now the north central part of the harbor?

Mr. ROBERTSON. Yes, sir. There is plenty of depth of water there, and it is a good harbor, and there is no reason why they should not come in there.

The CHAIRMAN. How far is it from the outer to the inner harbor?

Mr. ROBERTSON. It is about $3\frac{1}{2}$ miles to the place where we want to make this improvement.

The channel was, up to 1912, considered adequate and safe, but when the coastwise traffic began to use deep-draft modern boats, it at once became dangerous, and on account of the danger from ships grounding, a movement was started in 1912 for a preliminary survey, which was made by the War Department, and the whole project was approved by them in full and passed by Congress in 1914, as per House Document No. 220, Sixty-third Congress, first session, but failed to pass the Senate, as that year no new projects anywhere were approved by the Senate.

This project carries with it an agreement passed by the State of Massachusetts to appropriate \$50,000 to assist in the matter and \$25,000 to be appropriated by the city of Beverly to be spent for building a municipal dock. This municipal dock, as you see it here on the map, is 580 feet long. There is the bulkhead, there is the pier, and there is the proposed line of the channel.

Mr. DEMPSEY. Now you are referring to the small map, showing the proposed location of the bulkhead and the municipal wharf at the foot of Water Street, Beverly, Mass.?

Mr. ROBERTSON. Yes, sir.

The CHAIRMAN. Does that describe the location of the proposed municipal terminal so that one could understand it?

Mr. ROBERTSON. Yes, sir.

The CHAIRMAN. Without reference to the map?

Mr. ROBERTSON. Yes, sir; it is perfectly simple. With the map here you see the Toucks point, and you get the proposition exactly on there, the Toucks point here and the dredge point there, and it is very simple to follow that up. It is to have a depth of 24 feet of water there at low water. That is covered in the project, and the city stands ready to do it. I have here the laws that were passed by the city, cut out of the blue book, for both the State and the municipal appropriation.

Mr. DEMPSEY. Will that wharf there—the municipal wharf—provide for the transfer of commodities to and from the railroad?

Mr. ROBERTSON. Yes, sir; it will. I will touch on that a little later. I simply mentioned this to show that Massachusetts and the city of Beverly are willing to do their part and that it is something that the whole State approves of. The law originally was passed in 1914, and then carried on for three years in 1916, and there is no question about it.

The CHAIRMAN. Both of which bills passed the House, and failed to pass in the Senate?

Mr. ROBERTSON. Yes, sir. Beverly is the home of the United Shoe Machinery Co. that supplies 90 per cent of all machinery that manufactures shoes for both the Army and Navy and at present are working 24 hours per day on harness machinery for the Army.

Peabody, which we supply with coal and oil, is one of the largest manufacturing centers of the leather trade in the United States and is at the present time running 24 hours per day on leather goods for war purposes.

Ordinarily, when the country is at war with another nation, harbor improvements should not be considered, but in this case I think the possibility of help to the country is worth while.

We must all admit that the Army and Navy must have shoes. Without leather and machinery you can not have shoes, and at the

present moment there is a grave possibility that there will be a necessity of closing down, at least temporarily, some of the most important plants on account of the shortage of fuel, which I do not think would have happened if we had been able to have the larger steamers and barges come to our coal piers.

We received by water last year about 325,000 tons of coal, and, without question, if we could have used the larger ships to bring coal to us we would have received 400,000 tons, which would have been a great help in this time of stress.

Our coal plant is the largest and most modern east of Boston, and if the channel permitted, naval vessels of the largest class could get their coal without going into Boston. The advantage in this is the fact that Beverly is 20 miles nearer the Atlantic Ocean than Boston. Here is the Atlantic Ocean [indicating], and Boston lies up here [indicating]. It is perfectly simple to get in here with a good channel there [indicating]. That is why the naval authorities consider that Beverly Harbor should be taken care of for that purpose.

The CHAIRMAN. How far is it from Boston Harbor to Beverly Harbor by water?

Mr. ROBERTSON. Twenty miles. While coal is perhaps the dominating factor in the question, the oil-distributing plant of the Gulf Refining Co. is the largest in this part of the country, and are at the present time under contract to supply over 1,000,000 barrels of fuel oil to the Government for use in the Charlestown Navy Yard, Portsmouth Navy Yard, and the Watertown Arsenal. They also supply large quantities of lubricating oil to the Government.

All of the oil used by the gas companies of metropolitan Boston is supplied by this plant, and the oil company is seriously handicapped by not being able to send the largest steamers here on account of the shallowness and crookedness of the channel, as not less than four of their ships have been aground, and one of them was damaged to the extent of \$10,000.

If the channel permitted, oil-burning ships of the Navy could be supplied at the dock at the rate of 40,000 gallons per hour. The storage capacity of our oil plant is 6,000,000 gallons.

This project carries with it an agreement to build a municipal pier which would be of great value to the Government in the moving of men and munitions, as it will have direct rail connection with the Boston & Maine Railroad, the main line of which is one-quarter of a mile away; and is also connected by electric-trolley freight with the 200 miles of track of the Bay State Street Railway Co. The Bay State Street Railway covers the whole of eastern Massachusetts. We supply oil to northern and eastern Massachusetts, to Vermont, to New Hampshire, and to Maine from this plant, and we supply coal to a radius of 50 miles from this place by trolley freight and by the Boston & Maine Railroad and by heavy trucks. At present there are over 40 very heavy trucks carrying coal all over this locality, trying to alleviate the shortage.

The CHAIRMAN. If I would not interrupt you, sir, have you any established transportation lines maintaining a regular schedule which touch at Beverly?

Mr. ROBERTSON. No, sir.

The CHAIRMAN. Is there any of this freight which comes into Beverly upon a through bill of lading and joint traffic arrangement by which it is distributed from Beverly to interior points?

Mr. ROBERTSON. No, sir; but that is what we hope for by this municipal pier, for that rail connection. That is one of the reasons for urging this thing. We have never had anything of that kind. If this municipal pier is built—when it is finished there will be a transportation company to carry freight from Boston to Beverly.

The CHAIRMAN. Do I understand, then, that it is the purpose, if this improvement is made, not only to construct a municipal terminal, but also to establish lines of transportation with regular schedules, and take advantage of existing law for joint traffic arrangements with the railroads for through distribution to interior points?

Mr. ROBERTSON. Yes, sir; that is one of the principal theories of the whole situation. That has not been wholly worked out yet.

The CHAIRMAN. At what point or points would such regular lines of transportation touch, Boston, New York, or both?

Mr. ROBERTSON. No; neither, sir. We supply the manufacturing center of Massachusetts, New Hampshire, and probably some in Maine, but mostly in Massachusetts, such as Lowell, Lawrence, and Manchester.

The CHAIRMAN. I understand that would be the radius of distribution from Beverly?

Mr. ROBERTSON. About 50 to 75 miles.

The CHAIRMAN. But this line or lines of transportation which you hope to establish, with regular schedules, to what points would they run from Beverly, in all probability?

Mr. ROBERTSON. I am afraid I am not transportation man enough to explain that to you, sir.

Mr. DEMPSEY. The answer would be the same as you gave before, would it not? It would run to the same points?

Mr. ROBERTSON. That is my idea.

Mr. DEMPSEY. Boston has a better harbor than you have?

Mr. ROBERTSON. Yes, sir.

Mr. DEMPSEY. You could not hope to supply Boston?

Mr. ROBERTSON. No, sir.

The CHAIRMAN. When you refer to boat lines, you mean freight transportation lines?

Mr. ROBERTSON. Yes, sir.

The CHAIRMAN. That is a phase of it you have not probably worked out yet?

Mr. ROBERTSON. Not at all, sir.

The Navy Department has had under consideration for some time the supplying of coal and oil to their ships direct at the piers in Beverly, but gave the matter up for the present on account of the channel.

The above constitutes in a general way a brief description of the conditions and possibilities of the improvement of war conditions and activities, and I trust it may have your fullest consideration.

In connection with my statement I desire to submit copies of the laws above referred to.

(The matter referred to is printed in full as follows:)

[Chapter 49.]

APPROPRIATION FOR THE IMPROVEMENT OF BEVERLY HARBOR.

Resolved, That the sum of \$50,000 appropriated by chapter one hundred and thirty-eight of the resolves of the year nineteen hundred and fourteen for the improvement of Beverly Harbor shall continue to be available for the purposes and subject to the conditions stated in the said resolve for the period of three years after the passage of this resolve. (Approved Apr. 20, 1916.)

[Chapter 188.]

IMPROVEMENT OF BEVERLY HARBOR.

Resolved, That there be allowed and paid out of the treasury of the Commonwealth for the improvement of Beverly Harbor, in accordance with a project of the Federal Government for a channel twenty-four feet deep at mean low water, \$50,000: *Provided, however*, That no part of this amount shall be expended until the Congress of the United States shall have appropriated the sum of \$123,000 for the improvement aforesaid, and that when Congress shall have made such an appropriation, the \$50,000 hereby provided for shall be placed to the credit of the Secretary of War of the United States as a cash deposit, for the improvement of Beverly Harbor as above specified. (Approved July 1, 1914.)

[Chapter 321.]

AN ACT To authorize the city of Beverly to incur indebtedness for the improvement of its harbor and shores.

Be it enacted, etc., as follows:

SECTION 1. The city of Beverly, for the purpose of constructing a public wharf and a bulkhead to afford a dumping place for dredge spoil, all within the territorial limits of Beverly, and all as described in the report of William T. Russell, Chief of Engineers, United States Army, under date of September third, in the year nineteen hundred and thirteen, found in House Document Numbered Two hundred and twenty, of the first session of the Sixty-third Congress of the United States of America, said report being modified in accordance with suggestions made in the report of Edward Burr, acting Chief of Engineers, found in Rivers and Harbors Committee Document Numbered Eight, Sixty-third Congress, second session, or else within such limits or in such manner as the board of harbor and land commissioners of this Commonwealth may approve, is hereby authorized to acquire, by gift or purchase, or to take in fee by right of eminent domain, such flats and other land or real estate within the territorial limits of said city as may, in the discretion of the city, be necessary or desirable therefor, whether or not such flats are owned or held as appurtenant to any upland bordering on the harbor. The said public wharf shall be controlled and managed by the city of Beverly.

SEC. 2. Within sixty days after the final passage of an order of said city providing for the taking of any land or interest therein under the provisions of this act, the city shall file and cause to be recorded in the southern district registry of deeds for the county of Essex, a description thereof sufficiently accurate for identification, and a statement of the purpose for which it was taken, which shall be signed by the mayor and a majority of the board of aldermen. The filing of such description and statement shall constitute a taking in fee by the city of Beverly.

SEC. 3. The said city may agree with any person or corporation sustaining damages to his or its property by such taking as to the amount thereof, and the city shall pay the same; but if they are unable to agree, the damages shall, on petition of the person or corporation whose land is taken, or on the petition of the city, filed in the superior court within two years after the filing of such description of taking, be determined by a jury in the manner provided for determining damages sustained in the taking of land for laying out highways.

SEC. 4. For the above purposes and for the purpose of any dredging or other work that may be considered necessary or desirable by the said city for the

work described in section one, the city of Beverly may borrow a sum not exceeding twenty-five thousand dollars, and may issue therefor from time to time bonds or notes. Such bonds or notes shall be denominated on the face thereof, "City of Beverly, Harbor loan, act of nineteen hundred and fourteen," shall be signed by the treasurer and countersigned by the mayor and auditor of the city, shall bear interest at a rate not exceeding four and one-half per cent per annum, payable semiannually, and shall be payable by such annual payments, beginning not more than one year after the date of each loan, as will extinguish each loan within ten years from its date. The amount of such annual payment of any loan in any year shall not be less than the amount of the principal of said loan payable in any subsequent year. Each authorized issue shall constitute a separate loan. The city may sell the said bonds or notes at public or private sale, upon such terms and conditions as it may deem proper, but they shall not be sold for less than their par value, and the proceeds shall be used only for the purpose herein specified.

SEC. 5. This act shall take effect upon its passage. (Approved Apr. 8, 1914.)

The CHAIRMAN. What are the classes of petroleum and its products which are brought to Beverly?

Mr. ROBERTSON. I am afraid I will have to ask an oil man as to that. I know it is fuel oil and gas oil, so called, with which they make coal gas, gasoline, and kerosene, and all sorts of lubricating oil. That is what comes in there.

The CHAIRMAN. Now, from your official position at Beverly, it is proper to say to you that the committee are impressed by your statement of the intention of Beverly to construct a municipal terminal, having already secured the water front. Whether the amount of water front you have secured is adequate is a matter for your future consideration, but with the construction of your municipal terminal will come also the proposition to establish water lines of transportation, with regular schedules, and then the application to the Interstate Commerce Commission for a joint traffic arrangement between the water-transportation lines and the railroad lines radiating from Beverly, so that through traffic may be established and so that Beverly shall not only be a local distributing point, as it is at present, but will also be a point through which through traffic passes.

Mr. ROBERTSON. I understand, sir, perfectly. Incidentally I might say, on the question of this pier here, that if we want to make it a thousand feet long it is a simple matter to do it, because we have the right to do it right there.

The CHAIRMAN. When you come to consider the construction of your municipal terminal you will have the plans made by a competent engineer?

Mr. ROBERTSON. Yes, sir.

The CHAIRMAN. There are a few engineers in the country who are capable of devising plans for a municipal terminal suitable to the conditions of any locality. You would require, for instance, a different water terminal from one on the Ohio River, and you would, of course, construct one suitable to the local conditions?

Mr. ROBERTSON. Yes, sir.

The CHAIRMAN. Now, Mr. Lufkin, the committee would be glad to hear anyone else whom you desire us to hear.

Mr. LUFKIN. My impression is that this terminal, when it is constructed, is to be built under the direction of the Massachusetts Harbor and Public Land Commission. I think they have jurisdiction over that.

The CHAIRMAN. That is a very wise provision.

Mr. LUFKIN. Mr. John L. Saltonstall, a prominent citizen of Beverly, is here. I think he was in the Massachusetts Legislature at the time this matter came up, but I am not sure of that. However, he is perfectly familiar with the proposed project.

The CHAIRMAN. We will be very glad to hear Mr. Saltonstall

STATEMENT OF MR. JOHN L. SALTONSTALL, BEVERLY, MASS.

Mr. SALTONSTALL. Mr. Chairman, I really do not want to take the time of the committee, because I can only repeat in substance what has already been said. I have lived in Beverly all my life. I am thoroughly familiar with the situation there, and I can say with all frankness that I think this development, this harbor improvement there, is something which ought to come in any case, but I think it is more than ever important on account of the war situation that we have at the present time and which has been explained to you. I can say perfectly frankly that if it were not for the importance of this improvement, so far as the war is concerned, I would not care to come before this committee to advocate it now, but I do feel, and feel very strongly, that it would ease the situation, so far as the obtaining of oil and coal is concerned, as to all these different industries that are working on war supplies, and also as to the importance of supplying the naval ships there at Beverly, thus relieving the congestion at the navy yard and different coal supply stations in Boston.

The present situation of the channel is such that it is extremely difficult to navigate, even if there is enough water. The proposed channel—this is the outer harbor out here [indicating]—the proposed channel would cut across the flat. It runs out from the city now. As the channel is at present located, you come in here, and you go around a beacon, and you have a right-angle turn.

You go up here, and it has then almost what they call a hairpin turn to get around here and get into Beverly Harbor. Any boat that comes in there with any draft at all has to have a tug at either point to push her around the point, and if there is any wind it is very hard to get around there, so the improvement of the present channel, I think, would be unwise. It is proposed to build a municipal dock, which will be a simple thing to bring about.

The CHAIRMAN. Just enlarge upon this. You said you realized that under war conditions this project ought not to be adopted unless it was urgent. Can you give any other reasons as to why you think it is so urgent to demand its adoption or inclusion in the present bill?

Mr. SALTONSTALL. It seems to me, sir, that that letter written by Commandant Rush, of the Boston Navy Yard, is the answer to that question. I could not put it more strongly than he has put it, and I hope that copies can be made of that letter and put into the hands of the committee.

The CHAIRMAN. That will be printed as a part of the record.

Mr. SALTONSTALL. I could not give any stronger answer than he gives.

The CHAIRMAN. We are very glad to have heard from you.

Mr. DEMPSEY. Do these industries, the United Shoe Machinery Co. and these other industries, operate by coal? Is coal their fuel for manufacturing purposes?

Mr. SALTONSTALL. Yes.

Mr. LUFKIN. Mr. Chairman, Capt. W. E. McKay, representing the New England Fuel & Transportation Co., which is the company that transports all the coal into Beverly, is here, if the committee desires to ask him any questions.

STATEMENT OF CAPT. W. E. MCKAY, VICE PRESIDENT NEW ENGLAND FUEL & TRANSPORTATION CO., BEVERLY, MASS.

The CHAIRMAN. Mr. McKay, will you state your full name to the stenographer?

Mr. MCKAY. W. E. McKay.

The CHAIRMAN. And your occupation?

Mr. MCKAY. I am vice president of the New England Fuel & Transportation Co.

The CHAIRMAN. And its business?

Mr. MCKAY. Besides other business, they own and operate a fleet of steamers and barges carrying coal from the lower ports and from Curtis Bay, to the New England ports. They also have barges operating in other territories. They have this coal handling plant in Beverly, a distributing point to which they deliver on a regular cargo schedule, and where they have from time to time experienced severe restrictions, by reason of the turn in the channel, as described by Mr. Saltonstall, and by reason of the uncertainty as to depth, owing to the effect of wind and other influences on the tides, and they have had their steamers grounded. It will be clear to the committee that if this channel were deepened it would be a very much simpler matter to arrange for schedules of delivery. In other words, the company would not have to arrange for a small boat to be assigned particularly to this trade, a boat of a lesser draft, if the channel were deep enough to accommodate practically all of the fleet, as well as the fleet of the coal company; it would permit a very much surer and quicker delivery in any given time.

Now, our marine superintendent has prepared a statement with respect to the tonnage going into the harbor and the character of ships, setting forth since this channel was last improved in 1913 the type of steamships that have used the harbor, as follows:

Oil-tank steamers of the Gulf Refining Co., about 400 feet long, 50 feet beam, and from 22 to 25 feet loaded draft.

Coal steamers of New England Fuel & Transportation Co., and others, about 400 feet long, 53 feet beam, and 25 feet loaded draft.

Coal barges of about 2,000 tons cargo capacity, about 250 feet long, 36 feet beam, and from 17 feet to 24 feet loaded draft.

You can readily realize how difficult it is for vessels of this size to navigate this point in the existing channel and get around it, especially when there are any difficulties added by reason of the wind, and if a vessel of this large size touches at high tide and is held, then, of course, the tide falling causes great difficulty.

The vessels arriving at Beverly in the past year were 14 oil steamers, 1 oil barge, 36 coal steamers, 85 coal barges, 1 coal schooner, 12 lumber schooners, 2 lumber barges, and 48 various lighters. That is a total of 137 coal boats and 62 others, making a total of 199 altogether.

During the year two large steamers have grounded, sustaining considerable bottom damage, as the bottom is rocky. At this time, when we are so short of bottoms for water carriage, any interruption consequent upon damage of this kind is a very serious loss of water transportation, because holding a ship up for repairs that are necessary, of course, make a tremendous cut in the total tonnage that can be delivered. Two barges also grounded and two other large coal steamers touched bottom during the year in the channel, but fortunately no damage to the bottom was found when they were dry docked.

The greatest danger and risk of accident is in the bend of the channel when approaching the wharves, and if this bend is eliminated and the approach channel straightened and deepened as recommended by the United States Engineer Department, these risks would be removed and the port of Beverly made much more suitable for large-draft vessels than it is at present.

Mr. Chairman, I would like to submit this letter from our marine superintendent for your consideration.

The CHAIRMAN. Without objection, it will be included in the record.

(The letter referred to is here printed in full, as follows:)

BOSTON, MASS., January 17, 1918.

Mr. E. M. RICHARDS,

Treasurer New England Fuel & Transportation Co.,

Boston, Mass.

DEAR SIR: The type of steamships using Beverly Harbor since the channel was made navigable for large vessels during 1913 is as follows:

(1) Oil-tank steamers of the Gulf Refining Co., about 400 feet long, 50 feet beam, and from 22 to 25 feet loaded draft.

(2) Coal steamers of New England Fuel & Transportation Co. and others, about 400 feet long, 53 feet beam, and 25 feet loaded draft.

(3) Coal barges of about 2,000 tons cargo capacity, about 250 feet long, 36 feet beam, and from 17 to 24 feet loaded draft.

Other than this the harbor is only used by a few schooners carrying lumber cargoes and some lighters and barges.

The vessels arriving at Beverly in the past year are as follows:

Oil steamers.....	14
Oil barge.....	1
Coal steamers.....	36
Coal barges.....	85
Coal schooner.....	1
Lumber schooners.....	12
Lumber barges.....	2
Various lighters.....	48
Total.....	199

During the year two large steamers have grounded, sustaining considerable bottom damage, as the bottom is rocky. Also two barges have grounded; damage, if any, not known.

Two other large coal steamers have touched bottom in the channel, but, fortunately, no damage to bottom was found on dry-docking.

The greatest danger and risk of accident is in the bend of the channel when approaching the wharves, and if this bend was eliminated and the approach channel straightened and deepened, as recommended by the United States Engineering Department, these risks would be removed and the Port of Beverly made much more suitable for large deep-draft vessels than it is at present.

Yours, faithfully,

NEW ENGLAND FUEL & TRANSPORTATION CO.,
CHAS. SPENTUBERY,
Marine Superintendent.

Mr. McKAY. The matter of oil, of course, which has been touched upon, has been presented in Commandant Rusk's indorsement as one that is of such importance that any additional facilities provided, particularly on the New England coast, for coaling the fleet and for oiling the fleet, should receive much earnest thought. The Harbor of Beverly is such that if this improvement is made, the torpedo-boat destroyers could be consecutively oiled with great dispatch, and oil is now the fuel of our torpedo boats, those that are serving abroad being so equipped, and this would be a substantial and simple help immediately available for the fleet, and, of course, it would have its corollary commercial advantage.

Mr. LUFKIN. Mr. Chairman, the Gulf Refining Co. expected to have one of their men here, but owing to a tie-up in their business it was impossible for him to be here, but their general counsel, Mr. F. DeC. Faust, came here this morning and has explained to me the reason why one of their men who may know something about the oil business of the concern was not here, and to say that this improvement was a matter of vital importance to that concern.

I want to thank the chairman and the members of the committee for the opportunity of presenting our case this morning. We have no more witnesses. I have just one word in closing. To-day in Massachusetts, and more particularly in our section, the coal situation is of the most critical nature imaginable. In addition to the places affected by the order of the National Fuel Administrator it has been found necessary, on order of the State administrator, to close practically all or at least a great many of our public schools. All the schools in the large cities, and practically all of the public buildings, are closed, either partially or wholly. Of course, while this improvement would not alleviate this condition now, we believe that it would certainly prove of great benefit to that industrial section of Essex County if there could be better facilities for the New England Gas & Coke Co. to get more coal, either in normal times or in abnormal times.

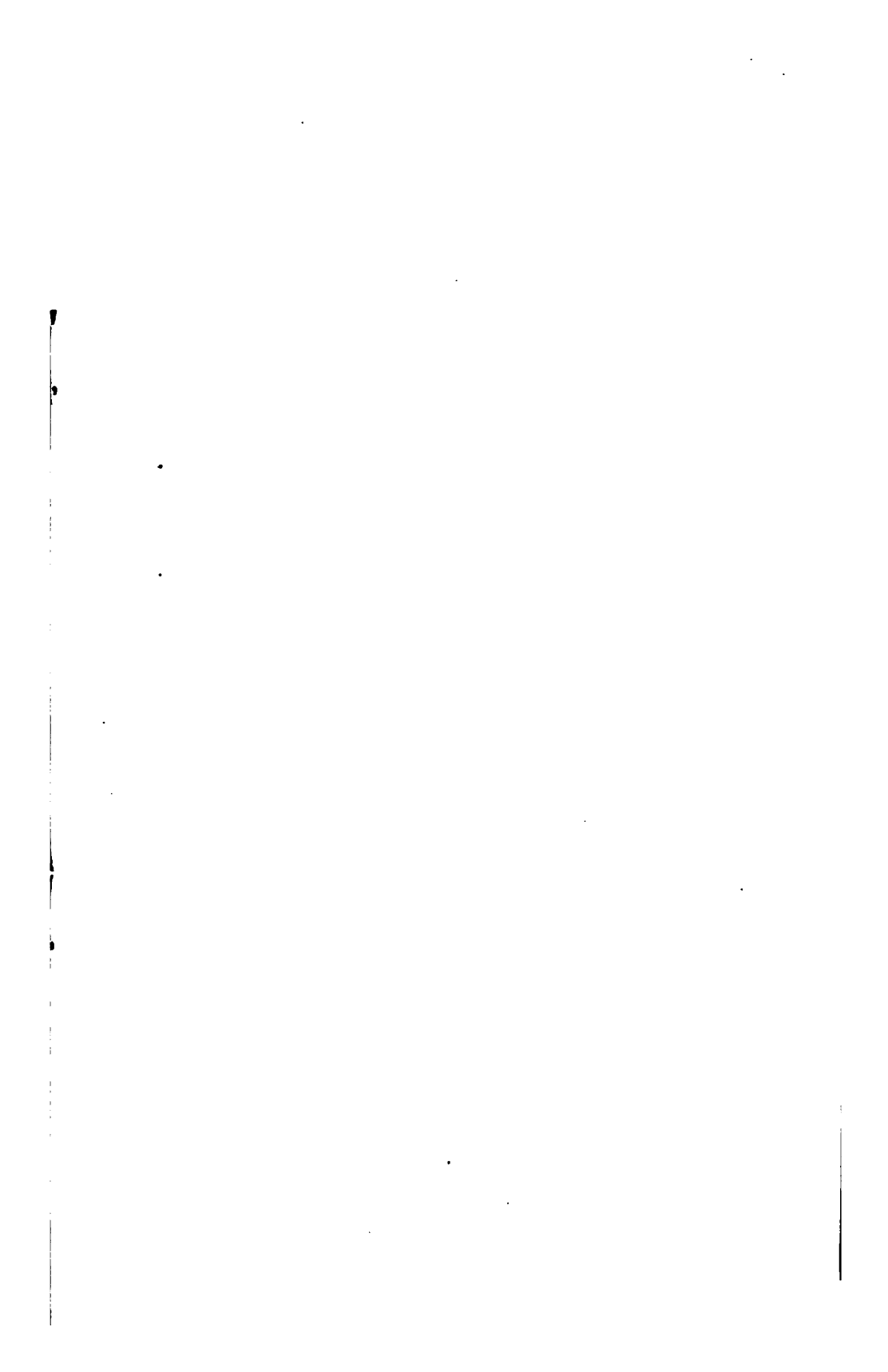
Mr. BOOHER. It might possibly prevent the rigors of the coal trouble up there?

Mr. LUFKIN. I think undoubtedly it would help. It would certainly give great opportunities for getting coal in there, and at the present time this harbor and Salem Harbor are practically the only places along that coast between Boston and Gloucester where they get any coal at all by water. It all has to come into Boston and be rehandled.

The CHAIRMAN. Mr. Lufkin, you and the gentlemen of the delegation, expressing my own opinion, have made a very strong presentation of the case, not only as to its merits, but as its urgency for inclusion in the pending bill. The hearing will be printed, and the project will be presented to the committee and carefully considered by them, and I think I may go further and say that if the committee can feel that they can, consistently, with war conditions, adopt this new project in the bill, they will be very glad to do so.

Mr. LUFKIN. Thank you, sir.

(Whereupon the committee adjourned.)



BOSTON HARBOR, MASS.

HEARINGS

ON THE

SUBJECT OF THE IMPROVEMENT OF BOSTON HARBOR, MASS.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FOURTH CONGRESS

CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman.*

GEORGE F. BURGESS, Texas.

CHARLES G. EDWARDS, Georgia.

JOHN H. SMALL, North Carolina.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

DANIEL A. DRISCOLL, New York.

THOMAS J. SCULLY, New Jersey.

CHARLES LIEB, Indiana.

WILLIAM KETTNER, California.

SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.

H. GARLAND DUPRE, Louisiana.

WILLIAM E. HUMPHREY, Washington.

CHARLES A. KENNEDY, Iowa.

ANDREW J. BARCHFELD, Pennsylvania.

ROBERT M. SWITZER, Ohio.

ALLEN T. TREADWAY, Massachusetts.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk.*

JOSEPH H. MCGANN, *Assistant Clerk.*

JANUARY 6, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE

1917

BOSTON HARBOR, MASS.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 6, 1917.

The committee was called to order at 10 a. m., Hon. S. M. Sparkman (chairman) presiding.

STATEMENT OF HON. JAMES A. GALLIVAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS.

Mr. GALLIVAN. We have come before your committee to ask its favorable consideration of an item recommended by the United States engineers in 1914 to the amount of \$400,000 as the initial expense to be incurred in deepening the channel in Boston Harbor to 40 feet. Boston has long sought for this improvement and its representatives in Congress for many years back have appeared before this committee in advocacy of the measure. There is much that can be said in its favor but because I recognize the fact that many of you have listened to arguments heretofore I dislike to take up the time of the committee to repeat the story that has been told over and over again. However, I am hoping that the result of this hearing will be favorable to our case, and I will briefly set before the committee some reasons why an appropriation should be agreed upon at this time in order that the necessary preliminary work may be outlined in the near future and the work itself be started before the close of the present European war. While we are busy enough in Boston just now, we expect to be much busier when the war lords have sheathed their swords and there is peace again on earth among men of good will. Boston wants to be ready to meet all comers and with your help a 40-foot channel in our harbor will prove of invaluable assistance in this direction. We are now doing things in Boston in anticipation of an expansion of our trade both at home and abroad. For instance, the largest drydock in the world is now in process of construction in South Boston, which I have the honor to represent here in Congress.

It is 1,200 feet long, 150 feet wide, and able to accommodate the largest vessels afloat or projected; and it might be stated in passing that there is not a dry dock on the Atlantic coast big enough to take several of the largest steamships now coming to our ports. If Boston merely had the freighters or the tramp steamers drawing 25 feet or so of water, of course she would not need a 40-foot channel, but it so happens that of the 172 commercial vessels in the whole world having a length of 500 feet and over during the year 1913, which was the year preceding the war, 27 of those vessels were in service in

Boston. In short, almost one-sixth of all the vessels in this world 500 feet and over in length were in service in Boston Harbor. Now, it does not seem fair to Boston, and it is not fair to the steamship companies, when they put in service in Boston Harbor a vessel capable of loading to 34 feet, that that ship can only be loaded to 31 feet at the most, for the difference of 3 feet in vessels of the type in service to Boston would carry practically one-third more cargo with a comparatively light increase of cost for operation, and this 3 feet makes it profitable for that ship to trade in Boston. I am informed by those who ought to know that the 35-foot channel at Boston is only the equivalent of a 30-foot channel or less, for at low tide, with an offshore wind, there is a minus tide of 2 to 3 feet, which brings the 35-foot channel down to 32 or 33 feet. It appears that a vessel under way has a squat in the water of about 3 feet, bringing the 33-foot channel down to 30 feet, so far as that particular vessel is concerned, and a boat should be entitled at least to a couple of feet more under her keel as a matter of safety, which still further reduces the available depth to 28 feet.

Now, Mr. Chairman, 14 of the trans-Atlantic lines at Boston carry passengers, varying from a few hundred to a few thousand, and as a matter of safety the channel should be deepened; and also as a matter of expedition, for Boston's nearness to Europe of 190 miles against the nearest Atlantic port on the south, which is New York, is appreciably diminished if the boats at Boston must wait for the tide to enter or leave the port. It is customary for the boats to wait for the tide and, in my judgment, it always has been. Of course it will sometimes depend upon the size of the cargo and the number of passengers; but, as a general rule, they wait for the tide, and we have often seen them in the lower harbor waiting for the tide before coming up to Boston Harbor.

The CHAIRMAN. I have never been able to get satisfactory statistics of the foreign commerce to Boston in tons. They usually give it in values.

Mr. GALLIVAN. I can give it to you in 1912 right now, which is about the best year I can quote in view of the world being at war since 1914. In 1912 Boston had 3,061,733 net tons of shipping in the foreign trade. I do not know just what that covers.

The CHAIRMAN. That covers the registered tonnage of the vessels. What we would like to have is the tons of cargo carried in the foreign trade.

Mr. TREADWAY. Possibly this information from the report of the directors of the port of Boston, made last year, will give the information:

The foreign commerce for the port of Boston for 1915 was \$290,516,803, a gain of \$57,047,284, or 24.4 per cent over 1914; imports for the year amounting to \$171,353,793 and exports \$119,163,010. Twelve thousand and forty-nine ships of 15,155,568 tonnage entered the port of Boston during the past year.

The CHAIRMAN. That information is given in the reports of the Chief of Engineers. What we would like to have is the commerce in tons.

Mr. GALLIVAN. We can readily get that for you, Mr. Chairman.

Mr. BOOHER. This report, for instance, now before me says there were 2,000,000 tons. That is in 1914. Does that 2,000,000 tons include the coastwise trade?

Mr. GALLIVAN. I do not think so. I think it is divided.

Mr. BOOHER. Why can't we have the coastwise trade as well as the other?

Mr. GALLIVAN. I can say here that in 1912 Boston had 8,693,338 net tons of shipping in the coastwise trade alone. It had 3,061,733 net tons of shipping in the foreign trade, making a total of 11,755,071 tons.

Mr. BOOHER. What year was that?

Mr. GALLIVAN. 1912.

Mr. BOOHER. This report was made in 1912?

Mr. GALLIVAN. These figures are absolutely reliable, I would say, Mr. Booher, because they were prepared for me by this commission.

Mr. BOOHER. I am not questioning that, Mr. Gallivan. Now, then, it has fallen off very wonderfully since that?

Mr. GALLIVAN. Oh, no; not our tonnage.

Mr. HUMPHREY. No; your tonnage has increased.

Mr. TREADWAY. You are doing more business in the port of Boston now than you ever did. I think, possibly, Mr. Chairman, your question may be answered on page 45 of this pamphlet we have here, entitled "Ports of the United States." It shows the tonnage in foreign commerce, American steamships, of 434,939; American sailing vessels, 34,019; foreign steamships, 4,719,955; foreign sailing vessels, 88,572. For domestic and coastwise it gives the same thing, showing a total tonnage there of 24,749,328.

The CHAIRMAN. That is the vessels.

Mr. TREADWAY. Yes. You want the freight tonnage—the cargo tonnage?

The CHAIRMAN. Yes.

Mr. SWITZER. This report shows it here, does it not, as near as you can get it, about 2,000,000 foreign and 6,000,000 tons of coal and 500,000 bales of cotton?

The CHAIRMAN. I want to get an idea of that, because it did appear to me it ought to be larger.

Mr. SWITZER. That 6,000,000 is coastwise.

Mr. TREADWAY. Is that all cotton, Mr. Switzer, or general?

Mr. SWITZER. No; 6,000,000 tons of coal and cotton over 500,000 bales. That is in the coastwise. It says aggregating a very large tonnage.

The CHAIRMAN. That can be obtained later, I think, and put in the record. I think we can easily get that.

Mr. GALLIVAN. Yes, sir.

The CHAIRMAN. You may proceed, then.

Mr. GALLIVAN. There is not very much more I have to add, except this, for the information of those members of the committee who may not be familiar with the Boston Harbor: The port of Boston has 141 miles of linear water front, extending from Point Shirley, or Winthrop, on the north to Point Allerton, or Hull, on the south; 40 miles of this 141 is used commercially, of which about 10 miles is located in Boston proper. Our harbor has a water area of 47 square miles, covering 30,000 acres, and that does not include the numerous small islands which are in the harbor.

In the past 40 years our Commonwealth has cooperated with the Federal Government to the extent of \$11,000,000, as I said in open-

ing, of which \$5,406,000 was spent under the jurisdiction of the State harbor and land commission, from 1870 to 1911, and \$5,381,000 was spent by the directors of the port of Boston from 1911 to September 1, 1914. The board of port directors, which has been succeeded by a new commission, known as the waterways commission, now have about \$4,000,000 left to spend, and they are particularly interested in this matter of a 40-foot channel.

Since the board of port commissioners was established in 1911—and this item represents up to September, 1914—the shipping tonnage of the port increased 5 per cent; the foreign trade of the port, 13 per cent; the trans-Atlantic passenger business, over 43 per cent; and the number of steamship lines, over 22 per cent. I might add that in 1913, the year preceding the war, the trans-Atlantic passenger business of the port of Boston was 134,315, which was a gain of 28,500 over 1912 and a gain of 38,053 over 1911.

Mr. TREADWAY. May I interrupt you there? Isn't it a fact that the officials have been constantly urging the trans-Atlantic lines to put on their larger ships to Boston, and that is the reason of this increased passenger traffic, as well as freight increase?

Mr. GALLIVAN. Yes, sir; that is so.

Mr. TREADWAY. And it has to a certain extent—in no way binding, of course, but to a certain extent—induced the approval of the State officials of Massachusetts relative to the improvement of harbor depth because they put on those larger boats?

Mr. GALLIVAN. Yes; that is also true. I might add to those figures that there were also 1,600 Central American and West Indies passengers, 134,000 Canadian passengers, and about 408,000 coastwise passengers. Ending in that year, Mr. Chairman, there were 22,000,000 excursion passengers, making a total of about 23,000,000 people who used the port of Boston in the year 1913.

The CHAIRMAN. When did you say you will have the dry dock completed?

Mr. GALLIVAN. Within another 12 months we hope to have it completed. And, as Mr. Treadway has said, the commission of waterways has recently taken up with Secretary Daniels, of the Navy, a proposition to have the Government assist in the maintenance of the dry dock hereafter, and it has appealed to the Secretary.

Mr. TREADWAY. Excuse me for interrupting you, but isn't that more in the nature of a rental?

Mr. GALLIVAN. Exactly.

Mr. TREADWAY. Not a financial assistance?

Mr. GALLIVAN. No; I meant for the Government to practically take it over for its use.

The CHAIRMAN. You say you want the Government to take it over?

Mr. GALLIVAN. Not to take it from Boston; to rent it from Massachusetts.

The CHAIRMAN. I see.

Mr. GALLIVAN. And I understand that the first suggestion came from Washington.

The CHAIRMAN. It would not be a bad thing if the Government owned it, would it?

Mr. GALLIVAN. In my judgment, it would not be a bad thing.

Mr. SWITZER. The harbor facilities and depth of water are sufficient for all this coastwise trade, passenger and freight, as well as excursion.

Mr. GALLIVAN. Oh, yes.

Mr. SWITZER. This improvement, the reason for it, simply narrows down to a question of whether there is an urgency at this time to deepen the harbor and make it safer for these larger vessels?

Mr. GALLIVAN. It is not really the urgency at this particular moment.

Mr. SWITZER. I know; but I say it is simply to safeguard the larger vessels by deepening the harbor?

Mr. GALLIVAN. Hereafter. It would take a good many years, if this appropriation is authorized, before we would get the 40-foot channel.

Mr. HULBERT. You spoke about the Commonwealth of Massachusetts making some arrangement with the Navy Department with reference to the use of the State-owned dry-dock by the Federal authorities. In that connection I want to call your attention to a letter of the commandant of the navy yard at Boston, page 76, in which he states that up to the date of March 19, 1913, the deepest draft of Government vessels entering the harbor of Boston during his command was 29 feet 6 inches. Isn't it a fact that the super-dreadnaughts since built and the battle cruisers authorized have a draft in excess of that, and they would not be able to avail themselves of the use of this dry-dock unless you had a deeper channel?

Mr. GALLIVAN. That is true. That is one of the reasons the Navy Department is so interested.

The CHAIRMAN. I think, Mr. Gallivan, we should not only have property like that for naval purposes for the deepest draft naval vessels, but for freighters as well, for I look for a rapid development of foreign commerce after this war is over.

Mr. GALLIVAN. Yes.

The CHAIRMAN. I do not think the ending of the war will cause commerce to move more rapidly than would have been the case without the war. We were developing very rapidly along those lines before the war began, and this development will go on after the war, just as it would have been if the war had not occurred. I do not know that it is necessary to say much more. I want to add, however, I have been very much impressed for some years with the amount of work Massachusetts is doing for her own harbors. There is no State, I think, on the Atlantic coast or on the Gulf that is doing what Massachusetts is doing in proportion to the number of harbors she has. On the Pacific coast all three of the Pacific Coast States are doing a great deal themselves—contributing very liberally toward the development of their harbors, and they are now turning their attention to terminals, just as you are doing in your State.

Mr. GALLIVAN. Of course, Mr. Chairman, we realize—the people in Massachusetts—that the ocean is at our feet and that the future progress of our city and our State in a great measure depends upon what we are able to do for our harbor and for the port of Boston, and our Commonwealth has never been niggardly about appropriations for our harbor.

Mr. HULBERT. Are you acquainted with Hugh Bancroft?

Mr. GALLIVAN. I know him very well, sir. He is one of our first citizens.

Mr. HULBERT. He was chairman of the——

Mr. GALLIVAN. Chairman of the port directors.

Mr. HULBERT. I notice a statement made by him at page 45 of the report, in which he says: "As a part of this contract with the Hamburg-American Line we have undertaken to use every endeavor to obtain a 40-foot channel, which that company needs for the type of ship which that company has undertaken to put into the Boston service."

Mr. HUMPHREY. It is somewhat uncertain as to when the Hamburg-American Line will put vessels in the service, isn't it?

Mr. HULBERT. I do not know that it is. Wouldn't that indicate it is made necessary in order to accommodate vessels of that type no matter whether operated by the Hamburg-American Line, the Cunard Line, or any other line?

Mr. GALLIVAN. Yes. I did not get Mr. Humphrey's observation; it was interrupted across the table before it reached me; but we have five of the Hamburg-American Line's biggest ships now interned in Boston Harbor. They are lying off the light and have been ever since the war broke out.

Mr. KENNEDY. I would like to know how many vessels drawing 40 feet of the Atlantic fleet are now engaged in the foreign trade?

Mr. GALLIVAN. I am informed that there are several, but I do not know all of the latest ships of the trans-Atlantic fleet.

Mr. HULBERT. I have a list of them which I will be glad to furnish Mr. Gallivan, if he wants, to put in the record.

Mr. GALLIVAN. I will be glad to have it.

Mr. COSTELLO. I understood you to say the present commerce of the harbor of Boston is restricted by the extent you have not sufficient water and boats have to lay in the channel at low tide?

Mr. GALLIVAN. Yes, sir.

Mr. COSTELLO. Therefore there is necessity now for this deepening if you are going to utilize the full benefit of the shipping?

Mr. GALLIVAN. We think so and have thought so.

Mr. BOOHER. Are you asking for anything further than what the report of the engineers of 1914 gave Boston?

Mr. GALLIVAN. Oh, no, sir. We ask for that recommendation of the engineers to be carried out, as I understand.

Mr. BOOHER. They improved the outer harbor from President Roads out to the sea?

Mr. GALLIVAN. Exactly.

Mr. BOOHER. Now that minus channel you talk about does not occur back of President Roads, does it?

Mr. GALLIVAN. I should say not.

Mr. BOOHER. Then if we should improve from President Roads out to the ocean, you are getting all you are asking for?

Mr. GALLIVAN. That is my understanding.

Mr. TREADWAY. Perhaps I can assist Mr. Booher in that connection. The original project as reported by the district officer, recommended the complete improvement at an expense of about five millions, as I remember it.

Mr. BOOHER. That was from Chelsea Bridge out?

Mr. TREADWAY. That was the whole harbor; yes, sir; from Chelsea Bridge out. Then when the report and survey reached Gen. Kingman, he divided it and simply recommended the one section from President Roads out. And that is the application now before us and it is the one in the report of the engineers which we are considering.

Mr. BOOHER. The one you ask us to adopt now is the recommendation of Gen. Kingman?

Mr. TREADWAY. Yes, sir. That is practically one section of the complete report, is it not, Mr. Chairman? That is your understanding of it?

The CHAIRMAN. Yes.

Mr. TREADWAY. And that is all you are asking for now, of course?

Mr. GALLIVAN. Yes. I want to change just one set of figures I gave you, Mr. Chairman, if you do not mind. I find the latest report on terminal facilities, commerce, etc., of the ports of the United States, shows that there are 40 foreign steamship lines doing business with Boston and 16 coastwise lines.

Mr. HULBERT. Will you put the statement in, Mr. Gallivan, showing the number of sailings of each line?

Mr. GALLIVAN. Yes, sir.

The CHAIRMAN. Just put those figures in the record; then we will have it before us.

STATEMENT OF HON. PETER F. TAGUE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS.

Mr. TAGUE. Mr. Chairman and gentlemen, I suppose it is unnecessary for me to reiterate the statements of my colleagues from Massachusetts, except to say this, that the district I represent includes the navy yard. We have started already on the building program of the Navy Department. I understand that there are to be some large ways put in there for the building of the latest style, up-to-date, naval vessels. Now, I know of my own knowledge that the *Pennsylvania*, one of the latest styles of battleships of the United States Government, can not get up to Boston Navy Yard except at full high tide. I also know, of my own knowledge, that the steamships that have been referred to here, of the Hamburg-American Line and the Cunard Line, have had to be withdrawn from our harbor because they can not go in and out except at high tide.

The State of Massachusetts, as you have been told, is expending very freely its money on our harbor. In my own district, in a portion of the harbor known as the Mystic River, they have developed that portion of the harbor so that almost any steamer to-day can go up into that basin; and there is being built there to-day upwards of \$50,000,000 worth of property for ocean transportation. It connects directly with the railroads. Now, I know that the State commission, in its building on the tributaries of our harbor, are digging to a depth of 40 feet. At the docks built by the harbor commission and at every dock that is built by our port directors, the water is 40 feet. And the docks that we leased to the Hamburg-American Line, all of these docks are dug to a depth of 40 feet, anticipating that the Government will come in and give the same depth of water.

Now, the shore of Massachusetts is perhaps different from any other shore on the Atlantic coast—I believe far more treacherous. We have worse storms; it is harder to get into our harbor in a storm, and for that reason these great steamers are obliged to lie outside, and do not risk going in there on high tide, even when there is a severe storm, because of the drift of the different sands of the harbor at different stages of the season.

Col. NEWCOMER. And by getting an increased depth, would that correct that condition?

Mr. TAGUE. Yes; absolutely. The *Pennsylvania*, as I understand from the naval officials, draws naturally, when she is ready for ocean work, in the vicinity of 34 feet lying at the dock. When she is under steam, or under way, she makes a further draft of from 3 to 3½ and 4 feet while she is traveling.

The CHAIRMAN. Those superdreadnaughts that are proposed to be built, how much water are they to draw?

Mr. TAGUE. I believe they are to draw 30 to 32 feet. Those are the figures I get. I can furnish you with those figures if you want them.

Mr. BOOHER. Let me ask you right there, is there any dry dock on the Atlantic coast, so far as you know, that will accommodate one of those superdreadnaughts?

Mr. TAGUE. I believe the records of the Navy Department show there is none. This great dry dock we are building will accommodate anything afloat.

Mr. TREADWAY. May I interrupt you there just a moment, Mr. Tague? This dry dock, as Mr. Gallivan stated, is to be 1,200 feet long. Now, as you know, the locks of the Panama Canal are a thousand feet long; consequently, this dry dock is 200 feet longer than any of the locks of the Panama Canal. And, as I understand it, the Navy Department has established as its extreme length what will go through the locks at the canal.

Mr. BOOHER. Mr. Tague, you have plenty of depth of water, have you not, between President Roads and the dry docks now to get your large vessels in?

Mr. TAGUE. No; I do not understand there is sufficient depth of water from President Roads in; I understand there is one section of the harbor between President Roads and the dry dock that hasn't a 40-foot limit, or 35-foot either. This dry dock is built, gentlemen, so that you may understand, close to the mouth of our harbor. It is built at what we call the South Boston district, represented by Mr. Gallivan.

Mr. BOOHER. What I want to find out is, if we give you this 40 feet from President Roads to the sea, then have you got sufficient depth of water above President Roads to take our warships into the dry dock?

Mr. TAGUE. No; we have not.

Mr. BOOHER. Then that would have to be an after consideration. That dry dock would not be of any advantage to the United States until that was done.

Mr. TAGUE. That is my understanding of it. We have not sufficient water inside. The *Pennsylvania* to-day could never get up to the Boston Navy Yard.

The CHAIRMAN. Aren't you mistaken about that? I was under the impression the *Pennsylvania* could go up there if she wanted to.

Mr. TAGUE. Not if she is loaded; not if she is ready for the sea at the time.

The CHAIRMAN. You say the dreadnaughts are kept out. How about the battleships? They only draw 31 or 32 feet, and you have 35 feet up there now.

Mr. TAGUE. None of them have ever gone up to the navy yard at 35 feet. At low tide you could not get up there with 32-foot draft.

The CHAIRMAN. At mean low tide you have 35 feet in the channel. Of course, it may be the navy yard is off the channel.

Mr. TAGUE. No; the navy yard is right in the main channel.

The CHAIRMAN. Then you have 35 feet up to that point.

Mr. TAGUE. That is at high tide.

Mr. HULBERT. While the battleships only draw 31 and 32 feet, some of the colliers draw 33 and 34 feet.

The CHAIRMAN. We are not going to have so many colliers now; we are going to have oil-burning vessels. The purpose of this channel from President Roads out is to accommodate vessels going there on a considerable wave action, to prevent bumping and striking the bottom. The waves run pretty high there sometimes.

Mr. TREADWAY. And it has a rock bottom.

The CHAIRMAN. It is a rock bottom. But I think when you once get inside, you have plenty of water for any of the battleships.

Mr. TAGUE. I know right here now that the Cunard Line were obliged to withdraw two of the larger steamers (and the Cunard dock is within 200 yards of the Boston Navy Yard) for the reason that when they were loaded they could not get them out except at high tide; and they were never permitted to load the vessel to its capacity on account of the harbor. And I know, also, that all of our harbor where the bulk of the shipping is done, especially the foreign shipping, is done close to the navy-yard district, or the navy yard part of the harbor, up in the harbor. It has not been developed yet at the outer part of the harbor. Most of that is being developed at the present time. These new docks, that have just added so much to the value of our harbor, are built on the right of the harbor going out, and they are extending gradually down toward the outer harbor. But all of our shipping is in one compact district, in one section of the harbor, all in close proximity to the other shipping wharves and section.

Mr. TREADWAY. May I be allowed in closing to clear up possibly what is in Mr. Booher's mind, by reference to Col. Black's report. On page 5 of the report, he says:

It is apparent that on account of the exceptional exposure of this locality, a somewhat greater depth is necessary in the outer channel, from President Roads to the sea, in order to give it a capacity equivalent to that of the inner channel.

That is the idea.

Mr. BOOHER. That is, when you have this 40-foot channel out to the ocean, then you will have a channel equivalent to the channel from President Roads to the navy yard?

Mr. TREADWAY. I should so consider it. At the same time, I would not want to be absolutely positive. That is practically what he says, however.

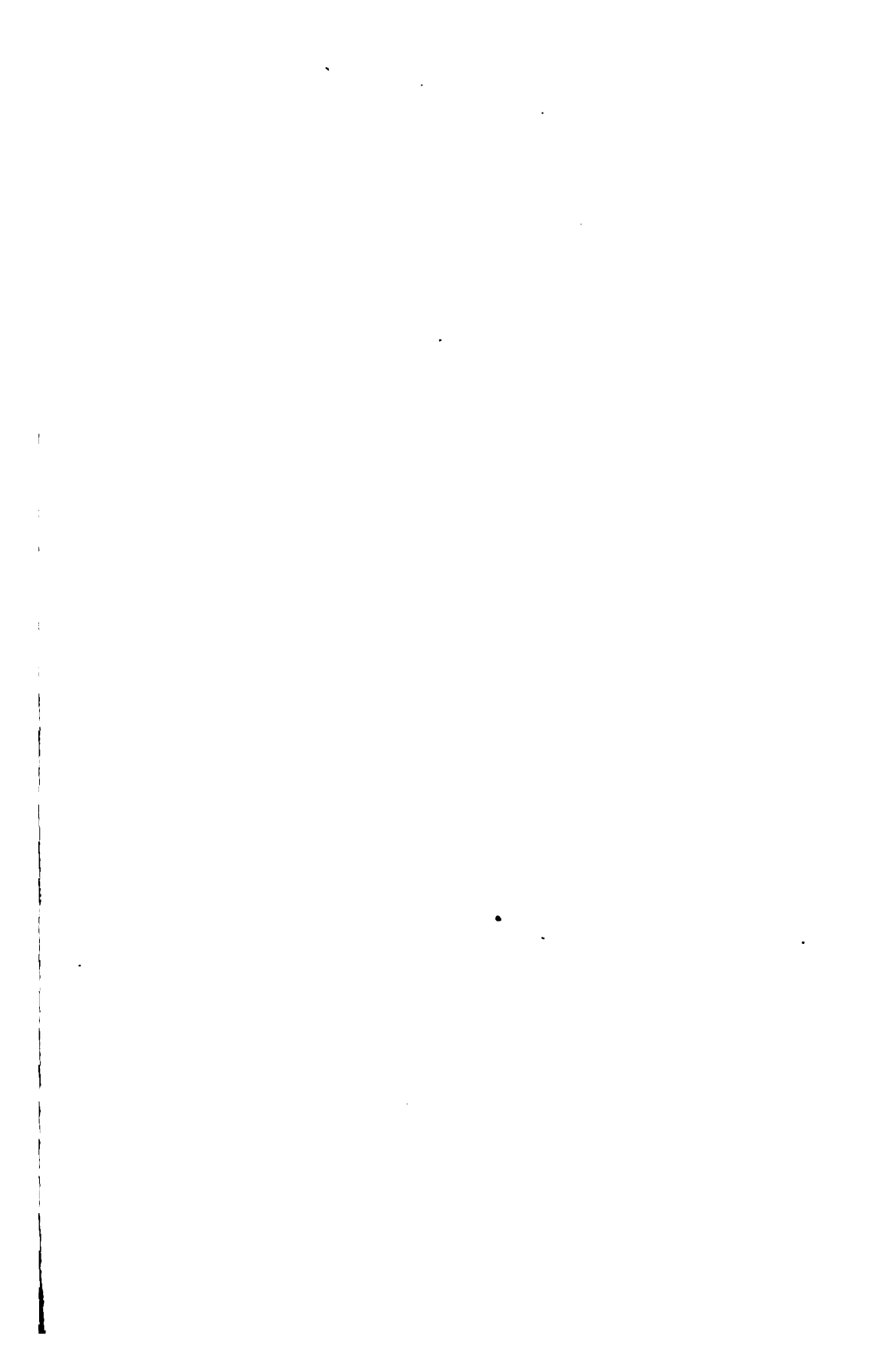
Mr. BOOHER. That is what I was trying to get at.

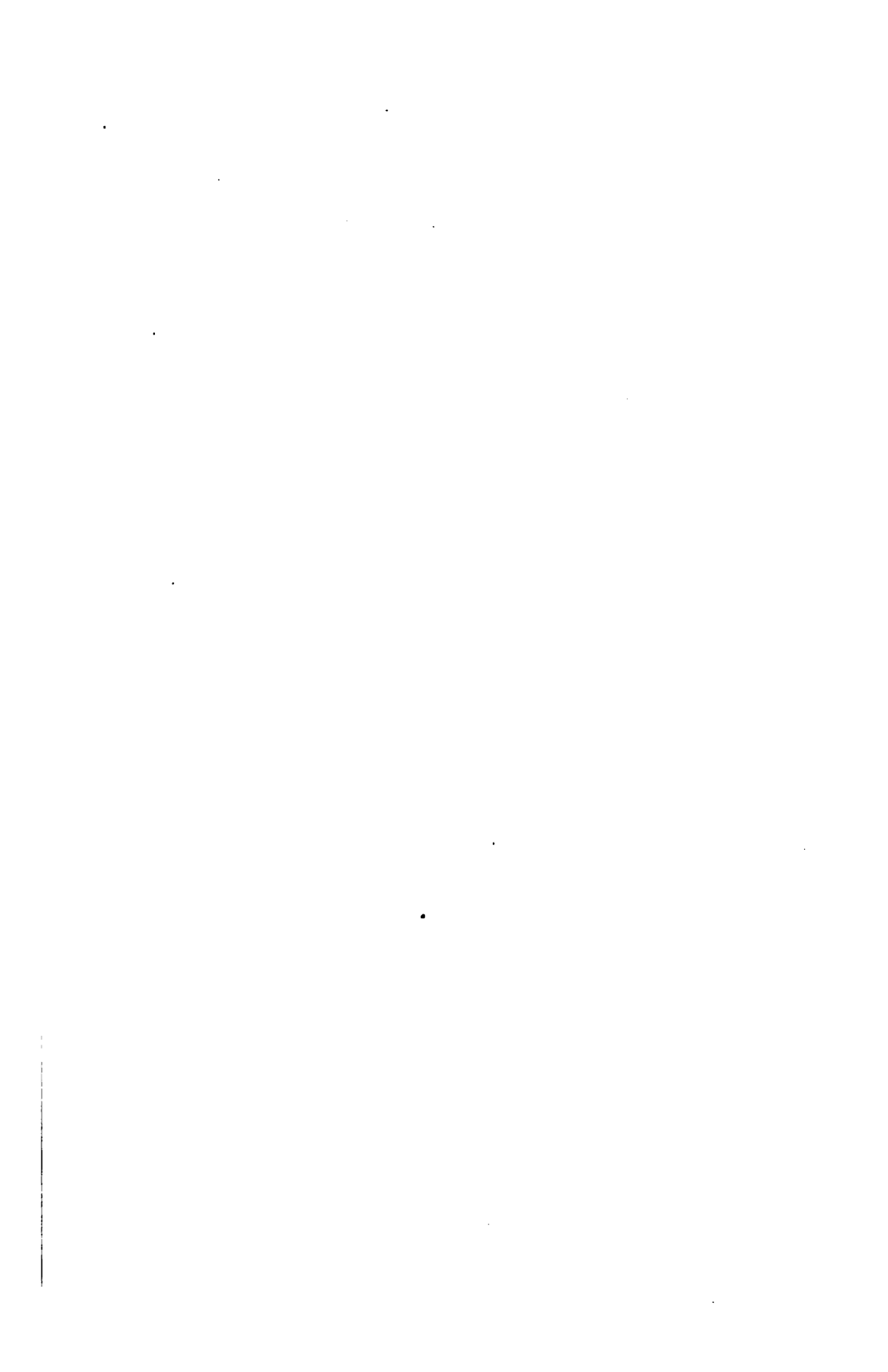
Mr. TREADWAY. He also says that the board believes that a depth of 40 feet is required for this purpose. That is Col. Black's statement.

The CHAIRMAN. A boat drawing 32 or 33 feet on the outside, where the wave action is severe, and it always is there, has to guard against the bumping of the boat against the bed of the channel. But when they once get inside, they have smooth water and a 35-foot channel to go up to the wharves at the city.

Mr. TREADWAY. I appreciate the time the committee has given Boston, and wish to thank you on behalf of my colleagues. There is one thing I would like to do; I would like to have permission of the committee to file, as part of the record, a statement which we can readily procure from the new directors, the Waterways Commission, as to the transaction with the Navy Department, looking to the right to lease the dry dock.

The CHAIRMAN. We would be glad to have all those things.





CHESAPEAKE & DELAWARE CANAL

HEARINGS

ON THE

SUBJECT OF THE PURCHASE AND IMPROVEMENT OF THE CHESAPEAKE & DELAWARE CANAL

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FOURTH CONGRESS

CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman*.

GEORGE F. BURGESS, Texas.

CHARLES G. EDWARDS, Georgia.

JOHN H. SMALL, North Carolina.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

DANIEL A. DRISCOLL, New York.

THOMAS J. SCULLY, New Jersey.

CHARLES LIEB, Indiana.

WILLIAM KELTNER, California.

SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.

H. GARLAND DUPRE, Louisiana.

WILLIAM E. HUMPHREY, Washington.

CHARLES A. KENNEDY, Iowa.

ANDREW J. BARCHEFFELD, Pennsylvania.

ROBERT M. SWITZER, Ohio.

ALLEN T. TREADWAY, Massachusetts.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

JANUARY 6, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

CHESAPEAKE & DELAWARE CANAL.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 6, 1917.

STATEMENT OF HON. J. HAMPTON MOORE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA.

Mr. MOORE. Mr. Chairman, I want to thank you and the members of the committee for the opportunity to appear before you this morning, and would say if I had known this project would be considered at all, I would have been very glad to have brought down some of our representative citizens, who are experts in matters of this kind and who could give authentic testimony.

The CHAIRMAN. We could not afford to hear outsiders, Mr. Moore.

Mr. MOORE. Very well; then, I will be glad to do the best I can. I am not informed, Mr. Chairman, as to whether you are going to discuss the Chesapeake & Delaware Canal proposition.

The CHAIRMAN. That is what I understood you wanted to discuss.

Mr. SWITZER. You have so many propositions.

Mr. MOORE. In answer to Mr. Switzer, I will say that we have very large interests, and it happens also, whether it is a commendable thing or not, that I am president of the Atlantic Deeper Waterways Association, which has a membership all along the Atlantic seaboard from Maine to Florida, inclusive. It has held a number of conventions at which a comprehensive plan of improvement along the Atlantic coast has been discussed and generally agitated with a view of securing the approval of Congress. A comprehensive plan has actually been approved by the United States Army Engineers. And at all of the recent conventions, including the last one held at Philadelphia (which exceeded the very large and important convention held at Savannah—the conventions alternating between the northern and southern States each year) resolutions reiterating, as a matter of primal importance, the improvement of the Chesapeake & Delaware Canal have been passed. And I think I can safely say that those resolutions represented the profound and earnest sentiments of at least 1,000 delegates coming from every one of the Atlantic Coast States. That accounts for speeches on the floor and elsewhere and importunities of the Members on behalf of the Chesapeake & Delaware Canal. It is not a one-man proposition, but it comes from a very large and representative body of citizens, who are earnestly advocating this important project.

It has been brought to the attention of the committee on former occasions, and I hesitate to go into it extensively at this time, but I

have brought here a map which indicates very clearly just exactly what the immediate project is. Before going into that particular phase of the question, however, I would like to say to the members of the committee, and I say it in all seriousness, that we have no thought whatever of asking for the immediate improvement of a great coastal chain, 1,800 miles long, from Maine to Florida. We have never in our wildest dreams hoped for an appropriation covering this entire project, but we have hoped and for 10 years have reasoned it out among ourselves and have endeavored to reason with Congress on the same line, that these points in the chain which were of greatest importance commercially ought to be first considered; and while certain improvements have been made along the line, due to local activity and the activity of Members of Congress interested in particular links of this great intracoastal chain, I think all have agreed at these various conventions that the next step to be taken is the improvement of the Chesapeake and Delaware section. It happens the word "canal" is being constantly used, because a canal does exist as between the Chesapeake Bay here and the Delaware Bay there [indicating on chart]—this small link of 13 and a fraction miles, leading across from the head of Delaware Bay to the head of Chesapeake Bay and saving this tremendous outside sailing distance down the Delaware Bay, into the Atlantic Ocean, around Cape Charles, into Hampton Roads, and up the Chesapeake Bay, to reach the city of Baltimore.

Mr. KENNEDY. What distance is that?

Mr. MOORE. The distance as between the two bays, the actual length of that canal, is a little in excess of 13 miles.

Mr. KENNEDY. I mean the distance around.

Mr. MOORE. The distance outside is 325 miles.

Mr. TREADWAY. That would be the point where you change—somewhere down here [indicating on chart]?

Mr. MOORE. That is Cape May, the southern part of New Jersey.

Mr. TREADWAY. What is the distance from there to Baltimore, as against Baltimore that way, from this point to Baltimore, or either way [indicating on chart]?

Mr. MOORE. It is 100 miles, approximately, from the open sea to the city of Philadelphia.

Mr. TREADWAY. And about the same to Baltimore?

Mr. MOORE. It is about 40 miles from the head of this canal to the open sea. It is 100 miles from Philadelphia down the river and through the bay, which shoals in in many places, to the ocean. The sailor takes all the risks of the open sea out here, all the way down this way, into Hampton Roads and up the Chesapeake Bay to Baltimore [indicating on chart].

This map was prepared with a view of showing the military advantage of this canal, which I suppose this committee does not care to discuss. But explaining the map itself, just briefly, it may be said that these little dots on the ocean here represent an attacking fleet. The presumption is that the American vessels would be prepared to protect the coast and to protect these large cities in the event of an attack. If at the present time, if an attacking fleet were to appear off Cape Charles here, outside of Norfolk, and such vessels of the United States as were available were in the Chesapeake Bay and, for strategic or other reasons, were obliged to go back,

there would be no possibility of their going through into the Delaware Bay at all. Yet if that 13 miles were connected up, speaking purely from a military standpoint (and it has been discussed very freely from that standpoint recently), if that 13 miles there were cut through, American vessels disabled or desiring to move about for strategical reasons, would be able to pass through the bay to the Philadelphia Navy Yard for repairs, if they were desired, or for the purpose of taking on supplies. Or if they desired to go out this way [indicating] and attack the foe from the rear, they would have that double opportunity for meeting the enemy. The same condition would hold true here at the mouth of the Delaware Bay; the same condition would hold here in the event of an attack at New York, and it is very probable an attack would be made there, because of the great loot that would be in sight and the opportunity of holding up the Nation by attempting a seizure of that city; and the same thing would hold here at the head of Long Island Sound at the approach to the port of Boston and outside—if this long link here at the head of Long Island Sound and between New York Bay were not open, and if this link from New York Bay to the head of the Delaware River were not open, or if this link here, the one we are discussing now, from the head of Delaware Bay to the head of Chesapeake Bay, were not open [indicating on map].

Mr. HUMPHREY. What is the depth of water, Mr. Moore, at that portion of the bay where you had your pointer; would you have to do any work in there?

Mr. MOORE. Some work would have to be done. But it is not a matter that need give the committee any concern, because all the engineers reports contemplate improving to any depth that might be required in the canal and their estimates are based on those improvements. As to the improvements here [indicating], none would have to be done there at all. Some would have to be done on this little river here, known as the Elk River, running down into the Chesapeake Bay, and some slight work on the Chesapeake Bay. But I think I am safe in saying that would not be any material consideration in your calculations.

Mr. KENNEDY. What depth is advocated now for the Chesapeake & Delaware Canal?

Mr. MOORE. The present depth, Mr. Kennedy, of the existing canal (which seems to cause us all the trouble) is 10 feet. Vessels that go through there now draw not more than 9 feet. They are not permitted—that is to say, vessels drawing more than 9 feet are not accepted by the existing company, which owns the canal and controls the tolls.

Mr. HULBERT. Is not that a paying proposition at the present time?

Mr. MOORE. It is a paying proposition only to this extent, that they are able to pay interest on their bonds. The stockholders get nothing, as I understand.

Mr. HULBERT. How long has that canal been in operation?

Mr. MOORE. The last I heard on that subject was that the bonds were paying 4 per cent. There are certain of the old families who hold those bonds who have been entirely misunderstood in this matter. I have no interest in them except to get rid of them. But those

4 per cent bonds seem to be a heritage handed down from the former owners, and they are really looked upon as heirlooms. Because, when the canal was first constructed, it was regarded as a great public enterprise and an enterprise of the Nation, even as much as the old Cumberland Road there. The story of the old trails is very interesting, and I could tell you one just as interesting of the early waterways of the country, if you would care to listen to it, because it is a story of the history of the country and the development that the people undertook by water before we had any railroads or thought of the railroads.

The CHAIRMAN. Down to what date does your information come about the earnings of the canal?

Mr. MOORE. This is the very latest, Mr. Chairman. I have heard nothing different. The whole question was thrashed out before a Senate committee about a year and a half ago, and a complete report on every phase of the canal has been presented and is of record.

The CHAIRMAN. Up to about three years ago, isn't it?

Mr. MOORE. It may have been. I am not sure. It was in response to a resolution offered by Senator Saulsbury, of the Committee on Coast and Insular Survey. It had rather extensive hearings, and they had every man connected with the existing company before it and went thoroughly into the matter. The Government has a slight interest in it still, and there is a suit pending at Wilmington, which, I think, at the present time has been appealed to Washington—it is certainly under the Attorney General—looking to the recovery of certain interest claimed by the Government to be due on bonds or securities held by it from the inception of the canal down to the time there was an embezzlement by one of the officers of the company which prevented their earning any dividends for some years.

Mr. SWITZER. The present proposition is to make a 12-foot depth?

Mr. MOORE. The present proposition is to make the depth of the canal 12 feet. That has been reported on favorably by the engineers, and it is the last of a series of reports that have been presented, every one of which would justify the acquisition of this particular property or of some other waterway across from the head of this bay to the head of that bay [indicating].

Mr. KENNEDY. A 12-foot canal would not help so much from a preparedness standpoint, would it?

Mr. MOORE. A greater depth has been discussed both by the Army and Navy engineers and officials, as well as by the commercial interests. Twelve feet, however, would be of incalculable value from the standpoint of the barge traffic, which is constantly increasing, due to the decadence of the sailing craft. The barge craft can be systematized and it can be built cheaper than the schooner. Barge construction and maintenance is insignificant compared to that of the old sailing vessel, which is passing out, and the barge is constantly on the increase, so that by reason of the improvements authorized by this committee on the upper Delaware from Philadelphia to Trenton they are actually building barges at Trenton to-day and turning them out for coal-carrying purposes. These new barges, by reason of the insufficient depth in this old canal between Trenton and Philadelphia, are obliged to pass down the Delaware River out into the bay, and are towed around here.

Mr. KENNEDY. I do not think you have answered my question. I want to know what benefit a 12-foot canal would be from the standpoint of preparedness. You spoke a minute ago about our war vessels going up there and going out another way. How could they do it, with only 12 feet of water?

Mr. MOORE. The only advantage at the present time would be the passing through of such war vessels as draw less than 12 feet, and there are mighty few, except possibly for the carrying of provisions and the carrying of troops. If we were going into the military side of it—

Mr. HUMPHREY. How about submarines?

Mr. MOORE. Very few submarines could use it at 12 feet. All of the submarines being built now require a greater depth than 12 feet. But we must get a start somehow, and I am frank to say I think all who are active in the movement for the improvement of that canal regard 12 feet as but a beginning of a larger highway.

Mr. COSTELLO. You are not restricting it to 12 feet?

Mr. MOORE. The engineers recommended 12 feet, because at the time of the surveys and report upon it there was no war in sight, but the business on the coast was increasing. Mr. Booher of Missouri asked a little while ago about the coastwise traffic, and wanted to know the tonnage of the coastwise traffic. It is impossible to obtain an accurate estimate of our coastwise traffic by tonnage. We have no method of obtaining the statistics. It is one of the crying needs of the average commercial man now to know just exactly what we are doing along the Atlantic seaboard, but we can not get those statistics. I have had a bill in for several sessions to endeavor to secure some bureau or system by which we could obtain a record of the unregistered or coastwise tonnage. It is prepared in a way at present which leads to inaccuracies. There is commerce coming and going constantly which is unrecorded, unregistered, of which this committee nor anyone else has any accurate knowledge.

Mr. BOOHER. Is that link of the canal the one in which Pennsylvania, Delaware, and Maryland have an interest?

Mr. MOORE. Yes.

Mr. BOOHER. Have those States conveyed that interest to the Government?

Mr. MOORE. The Government, I think, has interest in that canal now, but I am not sure.

Mr. BOOHER. Have they sold or by proper proceedings conveyed their interests to the Government, or do they still have their interest in that canal?

Mr. MOORE. I can not tell you definitely as to that, but I would like to read into the record, if a record is being made of this talk—

Mr. COSTELLO. Isn't it a fact that the States having an interest (if it amounts to anything I suppose it is still there) have all indicated their willingness to contribute that interest to the Government if the Government would act in taking over this canal?

Mr. MOORE. My impression is that is the fact, Mr. Costello. But I do not make that statement definitely, except I have before me some of the acts of Congress by which this project was started and by which the States were invited to go in.

Mr. COSTELLO. Just there, I understood that the States that did have an interest were willing to relinquish that interest to the Gov-

ernment if the Government took possession of this canal. Now, the question was asked about the depth here—what is the proposed depth. This is a lock canal, and the proposition is to make it a tidal canal, with a certain width, at a depth of 12 feet for the present. What is that width?

Mr. MOORE. It is 125 feet bottom width and 90 feet at the top.

Mr. COSTELLO. No; just the reverse, isn't it—90 feet bottom width and 125 feet top width?

Mr. MOORE. Yes; that is correct.

Mr. SWITZER. Is it proposed to eliminate the locks?

Mr. COSTELLO. Yes; and to make it a tidal canal.

Mr. MOORE. Suppose, in order to be accurate about this, you let me run in a section of the engineer's report. Answering Mr. Booher's question, I would like to say that this comes from the record, from one of the official reports. The total original cost of the canal was \$2,250,000, of which one-fifth, \$450,000, was paid by the United States, \$100,000 by the State of Pennsylvania, \$50,000 by the State of Maryland, \$25,000 by the State of Delaware, and the remainder by the citizens of the three States. That is as far as I can go.

Mr. TREADWAY. How long ago was that?

Mr. MOORE. That was away back before the canal was opened, in 1829. It was opened July 4, 1829.

Mr. BOOHER. In connection with the statement made by our friend from Philadelphia here, we have been told ever since this matter has been agitated, since I have been on the committee, that the States were willing to contribute to the General Government the bonds or stock they held in that canal; but, so far as I am informed, neither one of these States has ever taken any action at all to turn over to the Government their interest in that canal.

Mr. KENNEDY. Their interest really does not amount to anything outside of their simply having an interest.

Mr. BOOHER. But they have an interest there.

Mr. COSTELLO. It has been understood that was the case, and why couldn't we make the adoption conditional upon that?

Mr. MOORE. I think I could say for the State of Pennsylvania if it still had any interest, and I think it has not, that it certainly would be very ready to yield whatever interest it has to the Government.

Mr. COSTELLO. We all would.

Mr. SMALL. I would like to state, in connection with the original act, it appears that those three States are willing at any time, when Congress acts, to convey, by legislative action, their interest to the United States. That is in Gen. Agnus's report.

Mr. MOORE. I have that report here.

Mr. SMALL. That was submitted in 1907.

Mr. MOORE. Now, if the committee pleases, I will call your attention to the fact—I do not care whether you call it the Chesapeake & Delaware Canal project or a project to connect by water the Chesapeake and Delaware Bays, which would be preferable for all purposes of the committee, I assume, and would be just as satisfactory for the purposes of those who desire this communication; but it happens, and it ought to be stated, that nearly every commission (I think every commission) that has investigated and reported upon this proposition, as to the desirability of forming this link, have found this canal to be the best line of waterway and that whoever founded it had

evidently surveyed it with as great care as any survey which could be made by modern engineers, and they believe it is the most feasible of all the propositions that have been made to get across here, no matter whether it be the Sassafras route, which has been surveyed, the Choptank route or this route, which is the Chesapeake & Delaware Canal route. Now, there are three propositions which have been discussed from time to time and the most feasible and least expensive is that of the existing Chesapeake & Delaware Canal. It was the foresight of the early engineers that did this thing. They had to get over the country by horseback and to follow the banks of the streams in a very crude way, and when finally they got a union of the three States, along with the Government, to join in the building of this waterway, which was so essential to get from the South to the North and from the North to the South, they had to use horses and carts and picks and shovels, because they had no such modern machinery as the engineers have to-day; but even as it was, they built that canal in four years.

Mr. BOOHER. Will you permit a question about the interest of the States up there? Their interest is evidenced by bonds the same as that of the private owners, is it not—by stock?

Mr. MOORE. I have it here somewhere—the acts of Congress.

Mr. BOOHER. They are getting 4 per cent on their stock, just the same as the private owners?

Mr. MOORE. Mr. Booher, I will have to throw up my hands on the question of the financial interests in that company and the people involved. I have conscientiously avoided asking anything about that canal company, except as I could get it in a public way.

Mr. BOOHER. I want to know whether the States are receiving any part of this 4 per cent on their stock?

Mr. MOORE. I do not think so.

Mr. HULBERT. Isn't that on the bonds?

Mr. SMALL. The bonds. The stock receives no dividend.

Mr. MOORE. The official information is the stock pays nothing and has not paid anything for years, and it is due largely to the fact this company was very prosperous up to somewhere along about 1876, when it was the victim of an embezzlement by one of its officers—I think its treasurer—who got \$600,000, or thereabouts, and that threw the company so far back that it was never able, after that date, to pay dividends on the stock. The bonds have been paying 4 per cent until very recently, and I am assured and believe they pay that amount now. And that is one of the reasons why those who hold the bonds have not taken any particular steps to dispose of the property. So far as the company's position is concerned, that is fully stated in a report by the Secretary of War, who includes a letter from the president of the company, the substance of which is, there are so many people in interest that unless the Government has a proposition to present, they have no means of ascertaining what the people will do, because the owners have no proposition to present. But the company suggests that a condemnation will probably settle the whole proposition.

Mr. BOOHER. The Agnus committee made a very elaborate report on the value of that canal?

Mr. SMALL. Yes.

Mr. BOOHER. Do you know what the difference between the value placed on that canal by the Agnus committee and the private owners is?

Mr. SMALL. The private owners have never set any price on it.

Mr. BOOHER. The Agnus commission said they did; I do not know whether they did or not.

Mr. SMALL. No.

Mr. BOOHER. Then I have forgotten it.

Mr. SMALL. I am speaking from the record. No commission has ever reported that the owners of the property fixed any price on it. The Agnus commission, as well as the board of engineers, in the subsequent reports, do fix a valuation which they estimate as its worth to the United States.

Mr. BOOHER. In that connection, my reading of the Agnus report is that the Agnus commission reported the value of that canal.

Mr. MOORE. I can give the gentleman that.

Mr. BOOHER. And then they also gave the amount that the private owners asked for it.

Mr. SMALL. No.

Mr. BOOHER. If I am in error, I would like to be corrected.

Mr. SMALL. I think you are in error.

Mr. MOORE. The Agnus commission simply reported an estimate of value; they made an appraisal of all the property of the company and made an estimate of the value.

The CHAIRMAN. I want to say to members of the committee that in the hearing had before this committee in the Sixty-third Congress on January 15, 1914, you will find answers to all those questions. Mr. Small is right. There never has been any offer made by the owners of that canal to sell, nor have they ever fixed any price upon it.

Mr. MOORE. Now, Mr. Chairman, if you will permit me to answer Mr. Booher, I think I can do it, because I have the official documents here. A little while ago I quoted from the letter from the Secretary of War dated March 11, 1915, on page 7 of which is the statement that the original cost of the canal was \$2,250,000, of which so much was contributed by the Government, etc. Accepting that as the original cost of the canal, back in 1829, I place alongside of it the report of the so-called Agnus Commission, dated January 12, and the letters of the Secretary of War, Mr. Taft, transmitting it, being dated January 12, 1907, on page 3 of which, under the head of "The appraisal of the Chesapeake & Delaware Canal" appears the following:

In the appraisal of the works of the Chesapeake & Delaware Canal the canal company was called upon to furnish detailed bills of inventory of its property with itemized valuation, but repeated requests failed to secure any but the most insufficient and almost totally useless figures. If there are any records of surveys showing the original profile of the canal route, or of the canal in detail, as it now exists, the commission has not been able to secure them. To make such surveys would consume more time and money than are available, and in view of the fact that it is well-nigh impossible to separately evaluate "the works and franchises," the latter being practically inseparable from the former, expensive surveys in this connection would prove unjustifiable. The commission has, however, considered the value of the works and franchises in every way (see Appendix B), and it states as its appraised "value of the works and franchises of the Chesapeake & Delaware Canal," \$2,514,289.70.

Now, considering all improvements made from 1829, when money was certainly a little more desirable and more valuable than it is to-day and would go much further than it does to-day, and consider-

ing that the cost of that canal in 1829 was \$2,250,000, with the improvements made from 1829 down to 1907, it does not appear that there is such a tremendous mistake on the part of the engineers when they estimate the cost, based on their careful appraisal, at \$2,514,000. That is only quarter of a million more, after the lapse of all these years, over the original value, and when money was of course easier than in 1829.

I am not arguing for the company, but in the interest of fairness I make that statement. The appraisal does not seem to me to be so very far out of the way, except as the deterioration of the property has lowered it.

Mr. KENNEDY. I take it they made that valuation on the basis of digging the canal; that is what we would have to spend to do the same thing?

Mr. MOORE. Yes.

Mr. KENNEDY. Of course there are bonds out of \$2,600,000, which I think were selling, when they did sell, for 49 cents, or something like that. It would not be on an investment basis they were making those figures; it was probably on the basis of the Government doing the work at the present time, or on the basis of the work it would have to do if the canal was not there.

Mr. MOORE. Well, we all have our opinion as to what price we should pay for an old property. Sometimes we want it very badly and are willing to pay pretty nearly the owner's cost; then if we feel we are buying an old horse we do not care to pay the original price for the old horse, because it is pretty well worked out, and it is a fact this canal has been pretty well worked out. While in its better days they made money on it, they do not make any money on it now, except they are able to pay this 4 per cent on the bonds. There is, however, a great public necessity for the use of the canal apart from the use the private owners make of it.

Now the point is, so far as that particular property is concerned, whether the engineers having on three different occasions recommended the taking over the property—the Government does not need it—not only for commercial purposes as an outlet for trade but for preparedness purposes, if this committee dare discuss that question at all, for the welfare and protection of the Nation.

The CHAIRMAN. Have you a paper showing the commerce last year on that canal?

Mr. MOORE. I have not last year's figures, because I really did not know I would be called this morning and was not expecting to be called; but the figures of year before last were in excess of 1,000,000 tons that went through that canal and paid tolls to the company.

The CHAIRMAN. How many tons?

Mr. MOORE. One million tons, in small vessels, and in the very peculiar steamships that have to be constructed to meet the limited dimensions of the canal.

The CHAIRMAN. What class of vessels are going through there now?

Mr. MOORE. There is a fleet of steamships (we might call them steamboats, rather) that are built especially to go through those locks. The locks are 120 feet long; therefore the length of the vessel must be less than that.

Mr. DUPRÉ. May I ask you if the statement was made of the proposal to abandon all those locks?

Mr. MOORE. Yes; that is the recommendation of the engineers, to make it a sea-level canal.

Mr. SWITZER. With a 12-foot depth?

Mr. MOORE. With a 12-foot depth, and there is no engineering difficulty in the way at all.

Mr. TREADWAY. Then, as I understand, the trade that goes through there now has to be loaded and unloaded at the other end?

Mr. MOORE. No.

Mr. TREADWAY. You said the boats had to be specially constructed to go through?

Mr. MOORE. I would like to complete the statement. The locks are 120 feet long and 24 feet wide, and those vessels (I think I am within an inch of being accurate) are constructed so that they are not more than 23 feet 4 inches wide, leaving a few inches leeway to get through the canal, and of course they scrape each side. They are built like monoliths, and you wonder how they keep afloat, because they look top-heavy; and yet those vessels come from Philadelphia carrying trade that is organized in New England points and around New York, and some of which comes in through this old canal [indicating the Delaware & Raritan Canal], not very much; some comes in by rail and some this way [indicating on map], and it is carried to the port of Baltimore and points west and south. That is as far as the steamship business is concerned. So far as the barge business is concerned, it originates down here, principally in these waters [indicating]. The barges come down here and pick up cargoes of lumber, which is a constant and growing business—all these congested cities need all the lumber they can get from these States down here, South Carolina, North Carolina, Georgia, and Virginia, and it comes by rail up from certain other States—and it passes on up through this canal here, up through the Chesapeake Bay and then on up through this canal for distribution from Philadelphia. I have explained we are developing this barge traffic now at Trenton. Two barge lines started since the war in Europe to do business between Philadelphia and New York. And, gentlemen, I tell you that those barge lines have been doing a rushing business, and going through that miserable 7-foot canal there with 13 locks.

Mr. HULBERT. Who owns the New York & Raritan Canal?

Mr. MOORE. The Pennsylvania Railroad. It has it under a lease, which practically amounts to ownership, for 999 years. But I am talking about these barges. They have become an absolute necessity. I could bring you instance after instance, if you had the time to listen to it, of large industries along this river from Camden, on this side, to Bordentown, which is about there [indicating], or Morrisville, to Philadelphia, which are large industries that have grown up in the last few years, which can not have their freight accepted by the railroads. There is a railroad embargo on now which prevents the shipping of many products by rail. And they have thousands of men employed who could not be kept employed but for waterway service. I admit these lines here [indicating] have miserable old boats that ought not to be afloat to do their business, but they find plenty of business to do.

The CHAIRMAN. The business you speak of, between Trenton and New York, has sprung up recently?

Mr. MOORE. It has increased enormously.

The CHAIRMAN. I did not see much business five years ago when we went through there.

Mr. MOORE. There was some business then, but it was all hampered by the rates charged. The committee ought to know just what conditions have prevailed there. We have contended for years that if we had communication between Philadelphia and New York all of the coal that comes up from around here in this coal region [indicating], by virtue of that easy passage by barge through there, would enable that coal to go to New York, or up to New London, or to Boston, and, after paying for rehandling it at the pier, would reduce the price of coal at least a dollar a ton to the consumer in New England. And we believe it now. As the water transportation is controlled by the railroad at that point, there is no help for the consumer. At least that is what some people contend.

Mr. TREADWAY. How long is the Raritan?

Mr. MOORE. It is about 33 miles as it stands now. The engineers have reported upon that—

Mr. TREADWAY. And controlled by the Pennsylvania?

Mr. MOORE. And controlled absolutely by the Pennsylvania. But the Pennsylvania Railroad has recently seen a light. It sees the necessity of having some assistance; and if none of you heard the address of Gen. Black down here at the Rivers and Harbors Congress a few weeks ago, or read it—it is in print now; it would be well worth your while to read it—he, as president of the board, or as the division engineer at that time, went to the Pennsylvania Railroad—he went there with a feeling he would be put out of the office for coming there to obtain information about the waterways project, and yet they received him with open arms, and opened their books to him, and gave him all the help they could. I have been told by the superintendent of the canal that they would be glad to have some help there, and I think the railroad would be glad to get rid of it. But the engineers have not recommended the taking over of that canal, because it is 33 miles long, very irregular, and goes through a section of the country which they need not go through. They have recommended a much more direct route where there are no such conditions as prevail in regard to this one.

Mr. HULBERT. Is the survey which the State of New Jersey is making a survey of the canal owned by the Pennsylvania Railroad, or of some other projected canal?

Mr. MOORE. I would be very glad to make a statement about that if the committee will permit. This may partly account for the information Mr. Booher has in mind and, by the way, it was done while Mr. Wilson was governor of New Jersey. I appeared before his excellency and talked on this subject along with others; I think Mr. Small was there, and I know some of the citizens and others interested in these connecting links were there. The governor listened to us and seemed impressed, and subsequently the State legislature passed an act making an appropriation for a survey and creating a commission. They first created a commission, a ship-canal commission, and made a tentative arrangement to be put

into effect whenever the Government was ready to act, to pay for a right of way and for the entire property to be taken if the recommendation of the engineers was approved. And that would entirely eliminate this old canal and leave it on the hands of the Pennsylvania or anybody who held it for just such business as they could get out of it—and I guess they would close it up. But the State of New Jersey stands prepared to give the Government the right of way for all the land necessary for the new canal, when approved.

Mr. HULBERT. How much shorter will that new canal be?

Mr. MOORE. It is only 3 or 4 miles shorter. I think it is about 30 miles as the engineers recommend its construction now.

The CHAIRMAN. Coming back to this other canal, have you any very recent information as to what price the owners of that canal would be willing to sell it? Very recent information, I mean.

Mr. MOORE. Nothing since the letter of the president of the company, dated January 2, 1915.

The CHAIRMAN. From what page are you reading now?

Mr. MOORE. This is on page 3 of the letter of the Secretary of War, Senate Document 14, Sixty-fourth Congress, first session. And that letter states about as clearly, I think, as any one can state, what the position of the company is and has been from the beginning. May I read the letter?

The CHAIRMAN. Yes.

Mr. MOORE. And in reading this letter, I wish to say that although the company has its office in the same block in which I live, I have never been in the company's office and do not know its officers, except the secretary who appeared before the committee down here and with whom I talked when he was in Washington. There are some citizens up there who have spoken about the canal and evidently have some of those bonds, but I have no earthly interest in their affairs. That sort of information just comes offhand as it would between any two men talking on a matter of which they had knowledge. This is the letter of C. L. Nicholson, president of the Chesapeake & Delaware Canal Co., dated January 2, 1915, addressed to Maj. E. N. Johnston, War Department, United States Engineer's Office, Wilmington, Del., he being the officer to whom the Secretary of War delegated this work. The letter reads as follows:

DEAR SIR: Upon receipt of your letter of December 23, asking me to give you a price at which the Chesapeake & Delaware Canal Co.'s rights and property would be sold to the United States, a meeting of the directors was called, who carefully considered your request, being most anxious to give the Government the information that they desired, if it was possible to do so. The board, however, could not see how they could answer your question except in the same way they answered the Senate committee last April, when they made a similar request. The board of directors of the Chesapeake & Delaware Canal Co. do not control the stockholders or bondholders of that company, and the question as to what price would be accepted by them for their interest must be one which they alone can answer. The board do not see how they could do anything more than state that they could recommend a price that would pay the par value of the bonds and give a sufficient amount for the stockholders to induce them to consent to the sale. If the Government desires any proposition to be submitted to the stockholders, the board of directors will be glad to call a meeting for the purpose of considering whatever the Government would be willing to submit; but unless they have some proposition to submit, they can not see that it would be of any advantage to call the stockholders and bondholders together. The board of directors particularly desire the Government to realize that the refusal to name some definite price comes from no desire on the part of the

board not to do all in their power to further a sale of the property, but comes solely from a lack of power to say what the bondholders and stockholders will be willing to accept, as each bondholder may have a different idea as to value and can not be bound by the views of his fellow bondholders. It is respectfully suggested that probably the best and only method for fixing a fair value upon the canal and having the conveyance made to the Government will be by condemnation proceedings or through a commission appointed for that purpose.

I am reminded, by reading that letter, that two gentlemen of considerable prominence in our community have casually spoken to me about this, and when the question arose as to how in the world this old company could be gotten rid of, suggested that condemnation seemed to be the only way, because the shares had been inherited by the people who held them. That is about the situation. And one of those gentlemen—I do not mind mentioning names here, because it certainly shows there is no party bias in the matter—was John Cadwallader, a prominent Philadelphian, who was collector of the port under Grover Cleveland's administration. And another gentleman was my old personal friend, George W. Norris, who is now president of the Federal Farm Loan Board. Mr. Norris was particularly emphatic once when we had a meeting in Philadelphia as to how to meet this proposition. He was director of wharves, docks, and ferries commission at the time, and being a good lawyer, insisted that condemnation was the only way to get rid of those old interests.

Mr. DUPRÉ. Does this last report confirm the estimate made by the Angus commission as to the amount?

Mr. MOORE. Yes, substantially. The report of Secretary of War Garrison, which went very fully into this and reviewed all previous reports, stands as the last recommendation made.

Mr. SMALL. I would like to refer to House Document 391, Sixty-second Congress, second session, which is a report upon the entire coastal waterways from Boston to Beaufort, and from pages 85 to 99, contains the report of the special board on that section connecting the Chesapeake Bay and Delaware River. The Chief of Engineers, on page 4, recommends the immediate purchase of the Chesapeake & Delaware Canal and its deepening to a depth of 12 feet, bottom width 90 feet and top width 150 feet, which it was estimated was a sufficient width for its subsequent deepening if it should be deemed desirable.

In the report of the special board, in that same document, the present canal is described as being 36 feet wide at the bottom, 10 feet deep, 13½ miles long, and containing three locks 220 feet long in the clear by 24 feet wide in the clear. I should have said that the proposition for the improvement of this canal is to make it a tide-level canal, eliminating the locks. The width of those locks, 24 feet, is a serious handicap to the present use of the canal. Barges have to be built to conform to the width of that lock, so that they are long and narrow, and their cargo-carrying capacity is very much limited on account of it.

Some reference was made to the commerce of the canal as it stands now. The figures here, this special report being dated in 1911. I assume are for 1910, page 98:

According to the reports of the Chesapeake & Delaware Canal Co., the average annual shipments through the canal for the last five years have been 716,644 tons, for which the tolls have averaged \$163,151.33, or a general average of 22½ cents per ton. Applying this general rate to the traffic reported as now existing and ready to use a free canal, we find that a free canal would

produce a saving on tolls not less than \$577,309 per year. In addition to the saving on tolls, a further saving of 21½ cents per ton on the general run of freight is estimated as probable, due to the cheap transportation expected to develop over a free route. The saving from this cause would be not less than \$551,933 per year.

Without considering the saving in insurance, the annual saving on known existing coastwise commerce which would use a free canal may be stated as not less than \$1,229,242. The actual saving on all coastwise commerce which would use the canal, including that commerce now existing but not reported, would probably be considerably in excess of this amount.

Now, the commerce is further discussed down to and including page 99. This report shows that the States of Delaware, Maryland, and Pennsylvania originally contributed in 1824 to the building of the canal and received stock therefor. And in the Agnus report, it appears from correspondence from some official, I think their governors, that they would recommend at any time Congress acted that their legislatures provide legislation donating whatever interest they had to the United States. But the acquisition of the interest of those States is only an incident. They stand in the same relationship as other private stockholders in the canal and, of course, would have to receive attention in the acquisition of the canal in order to secure a good title—that is, if it was done voluntarily and without condemnation.

Mr. BOOHER. That could be disposed of by agreeing, if the project was adopted, to a condition to be put in the law that there would be no money paid until that was done.

Mr. SMALL. Certainly. But the same condition would apply to the price, however.

Mr. BOOHER. Right on that point I would like to read from the Agnus report, if you will permit me, just a little statement. I want to be correct about these things. Mr. Moore and yourself were both very confident that the Agnus committee never reported a valuation put upon that property by the owners. On the contrary, they did put a valuation upon that property. They got their information from the owners of that canal, and they give the different items of the cost. Now, I would like to read that into the record, because I did not think I was mistaken about it. This is Appendix B. Senate Document 215, Fifty-ninth Congress, second session, page 17. Agnus committee said this:

The commission has considered "the value of the works and franchises of the Chesapeake & Delaware Canal" in three ways.

First. The value of the property from the point of view of reproduction.

For this purpose the commission obtained a classified statement from the canal company, with its valuation of the various items.

This statement appeared high to the commission, and Mr. Ellis D. Thompson, a civil engineer, was employed to investigate and appraise the properties. (Copies of Mr. Thompson's reports are attached hereto.)

The following is a tabulated statement showing valuation of the company's work and properties as appraised by their officials and by the commission. If it is decided that the canal company should be reimbursed on this method of appraisement, the commission believes that no higher value than that given by it, viz. \$3,708,186, should be paid.

Now, here is a tabulated statement of the appraisal of that property, giving the items and the value put on it by the commission, and giving the items and the value of the property put on it by the canal company itself. The canal company's appraisement amounts to \$5,348,071, and the commission's valuation was \$3,708,186.

Mr. COSTELLO. What valuation does that place on the stock?

Mr. MOORE. Wouldn't it be well to put that appraisement in the record?

Mr. NEWCOMER. As I understand, the difficulty is this, that accepting this method of appraisement, taking up those different items submitted, in turn, that the canal company arrived at a total of \$5,300,000, substantially, and the Agnus commission at \$3,708,000; but they do not recommend that method of appraisement. But based upon that method they arrive at that conclusion.

Mr. MOORE. Why not consider the manner in which they made up that appraisement? The company estimates on dry excavation, for instance.

Mr. BOOHER. That is what I stated and read right here, so that there could be no mistake as to what I was saying. Now, they do not agree that is a reasonable valuation of that property; on the contrary, they say it is not.

Mr. MOORE. That is to say, the company fixed a high appraisal?

Mr. BOOHER. Yes, sir.

Mr. MOORE. Which is perfectly natural.

Mr. BOOHER. But, what I was trying to get at, you and Mr. Small said they never had put a value on it, whereas, on the contrary, they did.

Mr. MOORE. But the commission took a different view of it and put their own value on it.

Mr. BOOHER. Some one asked if they put the stock in there.

Mr. MOORE. There is no stock in that appraisement. That is simply an appraisement by the company of the cost.

Mr. BOOHER. Will you agree that the company valued their property at five million?

Mr. MOORE. I can not go beyond that statement. The table states it was the value fixed by the canal company, contrasted with the value fixed by the commission. If the company gave the commission a valuation, I assume it would give the highest valuation; but the commission was not affected by that.

Mr. BOOHER. The question I asked you was if the company had not put a value on this property to the Agnus commission, and you said positively it had not, and Mr. Small also. Now, I knew I had read it somewhere.

Mr. MOORE. Judge, I did not mean for a minute to contradict you; I was simply stating that I did not know of any valuation put upon it by the company, and I read the president's letter, which states they had no valuation put upon it and did not have the—

Mr. SMALL. Let me proceed, please. Judge Booher read, of course, correctly on pages 17 and 18 of the report of the Agnus commission. That was based upon certain inventoried prices of original cost of the canal, as I understand it, and the Agnus commission, based upon their inventory, made a calculation. But it appears in the Agnus report, on page 2:

The commission feels that no higher value than \$2,514,289.70 should be paid by the Government for the work, franchises, bonds, real property holdings, and all of the claims of the Chesapeake & Delaware Canal Co., except certain outstanding holdings.

Incidentally, what Mr. Moore and I understood the question of Mr. Booher to be was whether the company had ever fixed a price at which they were willing to sell to the United States. Mr. Moore answered they had never fixed a price, I agreed with him, and the record sustains that statement.

Now, Mr. Chairman, I have read here from that original report under the authorization of the act of 1909. The Chief of Engineers reserved the right to make a supplemental report to this, to which I have referred, and he did so in House Document 196, Sixty-third Congress, third session, dated August 1, 1913. And in that he recommends the purchase of the Chesapeake & Delaware Canal at a cost not to exceed that fixed by the Agnus commission, \$2,514,290, and to then enlarge it to a sea-level canal 12 feet deep, 90 feet bottom width, with the least interference to the existing traffic, following in general the methods indicated by the special board. The cost, including the first year's maintenance, amounts in round numbers to \$8,000,000. That is the last report of the Chief of Engineers upon the cost of the canal.

I would also like to call the attention of the committee to the report known as Senate Document 14, Sixty-fourth Congress, first session, which was in response to a Senate resolution addressed to the Secretary of War, and the report is dated March 11, 1915, of the Secretary of War, based upon the resolution of the Senate, as follows:

Resolved, That the Secretary of War is hereby directed to furnish for the use of the Senate such information as he can secure as to the price at which the existing Chesapeake & Delaware Canal and all the property, rights of property, franchises, and appurtenances used or required in connection therewith or appertaining thereto can be purchased.

And, further, That the Secretary of War is directed to secure, prepare, and report to the Senate summaries of reports of Government commissions, officers, and engineers, heretofore made, and such facts, information, and opinions of the boards or officers of the Army and Navy as he may deem proper or pertinent as to the advantage or disadvantages, commercial, naval, and military, of the acquisition of said canal by the United States.

The report contains all the available information as of March 11, 1915, regarding the price at which the Chesapeake & Delaware Canal can be purchased; second, a summary of all former reports on this canal, and, third, a presentation of all facts, and so forth, touching its naval and military value to the United States.

Mr. DUPRÉ. Didn't you mean "should be purchased"? You said "can be purchased." You meant that is the amount that ought to be paid for it; not the amount we can get it for?

Mr. SMALL. Oh, no.

Mr. DUPRÉ. You said "can be purchased."

Mr. SMALL. No; I made a mistake. The recommendation is it be purchased at a cost to the United States not exceeding \$2,514,000. This is a very interesting report, because it contains a summary of all the former reports on the subject.

Now, as to the military value of the canal, which is the only one to which I call attention—

Mr. KETTNER. Mr. Small, it has no military value at 12 feet, has it?

Mr. SMALL. Pages 29 and 30, in which they do say it will have some military value at 12 feet. But for its complete military value it is stated on page 30, paragraph 7, "As to 1-c," which is for the

transportation of men and material of the coast artillery and the coast-artillery supports from one bay to the other, they say, "the objects set forth in paragraph 3 above can be obtained by a sea-level canal having a depth of 18 feet at mean low water and a bottom width of about 150 feet."

But the question of the depth of the canal for commercial purposes has been fixed in the report of the Chief of Engineers at 12 feet, and its subsequent deepening, using the language of the Chief of Engineers here from the report which I read, will depend upon the extent to which it proves its value as a commercial proposition. And he further recommends that when further deepening to more than 12 feet shall become necessary, that then there shall be considerable local cooperation by the contiguous States. So that the present recommended proposition is a minimum depth of 12 feet, with appropriate width.

Mr. SWITZER. Mr. Chairman, then there is no urgency in the matter of defense whatever at this time?

Mr. SMALL. No; I would not say that. Here is the language—

Mr. SWITZER. They say they do not recommend it to be increased beyond this depth until the commercial interests demand its increased depth. It does not say anything about the naval and military proposition. I suppose if their needs grow to it, as they would do 20 years from now, the situation might be different; but they do not seem to predicate the increased depth upon the needs of the military and naval branches of our Government.

Mr. SMALL. From the report of the Army Board, in answer to (1), that is, the military value, if any, of the existence of this canal, they say:

In answer to (1), it is believed that the existing canal has some value as it exists to-day, as an obstacle to the advance of a hostile expedition landing on the west bank of Delaware Bay and advancing against Wilmington and Philadelphia. The fine, undefended harbor at Lewes, Del., makes such a landing a probability.

But of course, as to the larger vessels, a greater depth would be required.

Mr. SWITZER. What is the amount of those outstanding bonds?

Mr. SMALL. It appears on page 18 of the Agnus report, this paragraph:

Bonds representing the funded indebtedness, on which interest has been regularly paid, are reported by the company to be \$2,602,950, at which amount they have remained since May 31, 1887. On this amount, interest at 5 per cent was paid until and including 1893, since which time 4 per cent has been paid.

The CHAIRMAN. Mr. Moore, if there are no other questions, then we will bring this matter to a close.

Mr. MOORE. Mr. Chairman, there are ample reports on this subject, I think, to answer any question asked here to-day. The Agnus report goes into the commercial aspects of the matter quite extensively. I thought the committee would confine itself to that question. The Senate report, which Mr. Booher has quoted, does give the references cited.

I want to say that the people of Baltimore, and the mayor particularly I think on several occasions, and I think before this committee on one occasion in particular, urged a greater depth than 12 feet. The Baltimore viewpoint is that the depth ought to be 25 feet.

But speaking for the association which I represent, we have done the best we could, always, to keep within the bounds of the engineers' recommendations. We felt that was the safest course to pursue. This question of the bonds and stocks which seems to have befuddled the issue to a certain extent, we say is not material and ought not to stand in the way of a great public work. And I want the committee to feel we are in earnest about this. Personally, I am exceedingly in earnest about it. It is a great national project, not as a project to benefit the State of Delaware, because the land value may be increased on account of it; not a great project to benefit the State of Pennsylvania, because I presume its interest is remote as any, but because it is essential to the great carrying and transportation interests of the country. To the consumer as well as the producer, this is one of the vital issues of the times.

I have looked over the bills of the Rivers and Harbors Committee for a long period and watched them closely, and I do not know of a project in those bills, I do not care how small or how big, that appeals more directly to the people of the country than the opening up of this waterway between the Chesapeake and Delaware Bays. And I want the committee to understand we are in earnest about this matter; that it is not a one-man proposition, but there is a great force behind it. People are interested and I presume will be interested in it for some years to come, and we hope to get some action before this committee.

Mr. SWITZER. Don't you think it proper that the committee, if it proposes to take over a property of this kind, should inquire into what the original cost was?

Mr. MOORE. Entirely proper.

Mr. SWITZER. And the amount of bonds, the financial condition, and about what would be the cost of reconstructing the property?

Mr. MOORE. Entirely proper.

Mr. SWITZER. Especially when it is going to cost the Government millions of dollars?

Mr. MOORE. I want to say to the gentleman that the documents are full of information on this subject. There is report after report on this subject, volume upon volume; and yet every time we come before a committee somebody wants to know who stole that \$600,000. And that is not the question at all. It links up two great bodies of water, and I say it should not be held up indefinitely, year after year, because somebody embezzled some money in 1876. That has nothing to do with this question. And I mean that most earnestly.

Mr. SWITZER. As a lawyer having some experience in condemnation suits, Mr. Moore, don't you know it will likely cost two or three times more to condemn that property than it would to acquire it by private contract?

Mr. MOORE. I do not know about that, for I am not a lawyer, but I feel we are brought to a dead end on the question of negotiations. I would not, as a Member of Congress, attempt to negotiate with the people on the value of that property; I have no right to negotiate with them. If some outside association will do it, well and good; but I am not going to buy any real estate as a Member of Congress or make any negotiations with a corporation as a Member of Congress.

I am simply saying here is a great public necessity, something the people want; it is as fair a proposition as there is in the rivers and harbors bill. What I am asking this committee to do, and I am saying this very seriously, now, is to give us a chance to condemn that property or to move in some such way that the improvement can be begun, because it represents a public need and has a right to be considered before this committee and ought not to be postponed.

Mr. KETTNER. If the people are sufficiently interested they will get together and furnish the rights of way.

Mr. MOORE. Yes; but that does not cover——

Mr. SWITZER. When it comes to acquiring a right of way that runs up into the millions of dollars, I am always in favor of getting it at the most reasonable price possible, and I am not in favor of just simply voting a large lump sum of money to carry on a condemnation proceeding until some reasonable effort has been made to procure the right of way by means of private contract; in no instance do I favor that. I have taken that position heretofore; I have taken that position with Mr. Small's proposition.

Mr. MOORE. Before concluding, Mr. Chairman, I should like to say this, because I think it is fair to do so: There have been three routes considered in this proposition. The engineers have reported on having an entirely new route across here [indicating on map on wall]; also on a route through here [indicating]; and the completion of either one of those two projects, including acquiring of rights of way, would cost a good deal more money than taking over the existing route. It would be both lower in price and the best value.

Mr. KETTNER. That is true.

Mr. MOORE. So this would be the cheapest method, if we compare the two other projects with the old one; it would cost more to develop an entirely new canal than it would to purchase this canal.

Mr. HULBERT. I have a brief statement that I would like to quote for the record.

The CHAIRMAN. All right; you may read it.

Mr. HULBERT. I am quoting from House Document 196, Sixty-third Congress, first session, from a letter from the Chief of Engineers, who says:

That it is advisable for the United States to buy the Chesapeake & Delaware Canal at a cost to the United States not exceeding \$2,514,290, and to then enlarge it to a sea-level canal, of 12 feet depth and 90 feet bottom width, with the least interference practicable to existing traffic.

I will omit the matter now until I get to the essential:

As the work now done is progressive, and as under the present Federal laws the Engineer Department can always receive and expend local funds for such purposes, it will always be possible to increase the project depth above 12 feet up to 25 feet as fast as local cooperation furnishes the funds.

I mention that because it seems to me that it was in the mind of the Chief of Army Engineers when he made this report that if the Government carried this improvement up to 12 feet, it was expected that local cooperation would carry the depth up to 25 feet. And in that connection I quote further in regard to the New York Bay & Delaware River Canal:

The Chief of Engineers believes that if a right of way can be immediately secured along a route such as that in question comparatively level, comparatively short, comparatively straight, comparatively free from railroad and other

troublesome crossings, and therefore susceptible of a future advantageous development for boats of any draft, the \$20,000,000 project is worth being started immediately at Federal expense.

I am now omitting some unnecessary details:

As soon as traffic increases to such an extent that the lock canal, originally built with a view to enlargement, becomes congested, it will be possible to enlarge it to 125-foot bottom width, for an increased barge traffic, at a cost of only about \$3,000,000, and to then deepen it to 25 feet over 90 feet bottom width for deep-draft boats, at a further extra cost of about \$7,000,000, and should the traffic further increase to such an extent that the saving in time of boat passage, or in cost of summit level pumpage will warrant the extra expense, then the canal can be cut down to sea level, with a bottom width of from 90 to 125 feet and 25-foot depth, at a further cost of from \$15,000,000 to \$20,000,000. In both cases it is probable that the increased traffic, above that of a 12-foot depth lock canal, will not be of much benefit to the general public, but will be local between the adjoining States, and therefore a proper subject for cooperative payment by the States most interested.

As matters now stand, the Chief of Engineers believes that the first \$20,000,000 represents fully the national interest in this work, and that the rest of the expenditures, for enlarged dimensions and reduction to sea level, will be found to be of small interest to the rest of the country. In the opinion of the Chief of Engineers, it will be greatly to the benefit of the State of New Jersey to contribute \$7,000,000 for the widening of the 12-foot-depth lock canal to full 120-foot bottom width, and for the State of Pennsylvania to contribute \$7,000,000 to the securing of a 25-foot depth over 90-foot width through this same lock canal, and for this contribution to be made as soon as the United States agrees to contribute \$20,000,000 for a 12-foot depth 90-foot width lock canal.

Mr. COSTELLO. What is that, the Raritan Canal?

Mr. HULBERT. The waterway across New Jersey. There is just one more sentence I would like to read:

As the work to be done is progressive, and as under present Federal laws the Engineer Department can always receive and expend local funds for such purposes, it will always be possible to increase the project depth above 12 feet up to 25 feet as fast as local cooperation furnishes the funds.

In other words, it seems to me that this improvement has been recommended upon the distinct theory that up to 12 feet it is a national proposition and that above 12 feet it is a matter of local cooperation—both of them.

Mr. COSTELLO. Mr. Hulbert has covered just about what I wanted to say.

(Thereupon, at 1.30 p. m., the committee adjourned to meet at 2.30 p. m. this day.)

4

CUMBERLAND RIVER ABOVE NASHVILLE, TENN.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF THE CUMBERLAND RIVER ABOVE NASHVILLE, TENN.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 14 AND 16, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

CUMBERLAND RIVER ABOVE NASHVILLE, TENN.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Monday, January 14, 1918.

The committee this day met, Hon. John H. Small (chairman), presiding.

The CHAIRMAN. The committee will be glad to hear from you, Mr. Powers.

STATEMENT OF HON. CALEB POWERS, MEMBER OF CONGRESS FROM KENTUCKY.

Mr. POWERS. I desire to speak in reference to the upper Cumberland, Mr. Chairman. I hardly know whether this project in which I am interested, the canalization of the upper Cumberland, from Nashville to Burnside, Ky., could be called a new project or an old one. My judgment is it ought to be called an old project, because way back in 1886 the Congress of the United States approved the complete canalization of that stream, and since that date seven new locks and dams have been built on the Tennessee side of the Cumberland River, going from the Kentucky line, and one on the upper reaches of the Cumberland, at Burnside, Ky. The Board of Engineers for Rivers and Harbors, and the Chief Engineer of the Army, back in 1906, I believe it was—at any rate in that neighborhood—recommended that no further improvement on the Cumberland River be made at the time, but since that time, and since I have been a Member of this House—I have been here eight years—this project has been approved by the Chief of Engineers of the Army and by the Board of Engineers for Rivers and Harbors, and in 1914 this committee recommended favorably to the House and the House passed the bill putting the upper Cumberland back on the map.

The CHAIRMAN. That was the bill in the last session of the last Congress, of course?

Mr. POWERS. There have been two bills. One was in 1914, and in that year this committee reported favorably \$340,000, and that passed the House (but was killed in the Senate by the filibuster of the Senator from Ohio), helping to complete Lock No. 8 on the Tennessee side, and to purchase the sites for all the remaining locks and dams on the Cumberland River between Burnside, Ky., and Nashville, Tenn.; about four on the Tennessee side and six or eight on the Kentucky side. Congress has appropriated in the neighborhood of \$3,000,000, and that has been expended in improving the Cumberland River below Nashville, Tenn. About a like sum of money, above \$3,000,000, has been appropriated and expended by Congress on the

canalization of the Cumberland River above Nashville, Tenn. There is a gap in there not yet completed. There is a lock and dam on the upper reaches of the Cumberland River, 30 miles below Burnside, Ky.

The CHAIRMAN. How far is Burnside above Nashville?

Mr. POWERS. Three hundred and fifty-seven miles, is my recollection.

The canalization of this river has been begun both below and above. The usual course is to begin from the mouth and go up, but no reasons exist for such a course on this stream because the Queen & Crescent Railroad, running from Cincinnati, and the north to Chattanooga, and the south through Burnside, Ky., goes across the head waters of the Cumberland River at that point. So transportation facilities are furnished at the head of the river the same as at the mouth of the river. About \$6,000,000 have been expended on this stream, going from the mouth up and the head down. There is a stretch of territory in there that has not yet been locked and dammed. It will take in the neighborhood of ten locks more to complete this stretch of river. The locks and dams have been extended largely from the mouth up, for the purpose, I take it, of reaching the fine coal and timber lands below Burnside, and between Burnside and Nashville, Tenn.

Mr. KENNEDY. How much of the reach of the river has not been improved in that stretch?

Mr. POWERS. About 8 or 10 locks—I expect 100 to 150 miles, possibly.

It is especially important at this time, from the viewpoint of getting coal and timber. If there is any one thing needed by this country toward the successful prosecution of this war it is coal. Coal is essential for transportation facilities; coal is essential for running the factories and munition plants; coal is essential for household purposes; and if there is any one thing essential to the successful prosecution of this war it is coal, and this territory is rich in both coal and timber. I will read to you from a report of the Board of Engineers of Rivers and Harbors of February 4, 1914. In this report they said this:

A large part of this area is covered with timber of high value within hauling distance of the river, but under the existing uncertainties of navigation it can not be economically marketed. Much of the land in the valley and back in the hills is fertile, but can not be cultivated to advantage for the same reason. There are also extensive coal lands that can be made tributary to the upper reaches of the river by short rail connections, and it is claimed that these lands will be developed and that coal will be shipped out in large quantities.

The reason why no coal-mining operations have been put in operation along this river up to this time is this: The river is navigable four or five months out of the year, but, of course, during the summer season it is not. No coal mining operation will be set up along that river, no railroads will be built out to these fine coal fields, because to run a coal plant, you have got to run it the year round, and can not run it six months and close it down the remaining six. As soon as this river is navigable the year round coal mining operations will be put up along that river, short lines of railroads and branches will be extended out into those rich hills,

and it is tremendously important from that viewpoint that this river be canalized at the speediest possible moment.

There is a scope of territory down there—and I will read you a little further about the timber directly—as large as the State of Vermont that has not got a foot of railroad in it, not a foot. The county of Clinton is rich in coal.

The CHAIRMAN. Along what section of the upper river does that lie?

Mr. POWERS. Right along this river.

The CHAIRMAN. How far above Nashville?

Mr. POWERS. Down in Mr. Hull's district. The railroad does not get up as far as Lock No. 8, I think, on the Tennessee side, but it is from about Lock 8 on the Tennessee side up to Burnside, Ky. There is a scope of territory, as I say, there as big as Vermont that has not got a foot of railroad in the entire section.

The CHAIRMAN. What is the nearest railroad line to these coal fields?

Mr. POWERS. The nearest railroad line to these coal fields is the Q. & C. Railroad that runs through Burnside, Ky., and Burnside is the headwaters of navigation, and, of course, as soon as this river is canalized from Burnside on down the river, to reach these coal fields that will be shipped up the river to Burnside, then have the outlet north and south.

I was a member of this committee, and I never would have left it but for the fact that I could not hold my position here and at the same time retain the position of leading minority member on another important committee. I know that it has been the policy of this committee to make appropriations for streams along which railroads run on either bank, and I voted for them. For instance, the Sacramento River, in California. If we had a railroad running up and down either bank of the Cumberland, I do not think I would be here asking an appropriation. But the equities of our case—having no transportation by rail, having no transportation by water—it looks to me that it ought to appeal to the fair sense of the members of this committee and to the Members of Congress.

The CHAIRMAN. Mr. Powers, what are the names of the principal towns on the upper Cumberland between Nashville and Burnside?

Mr. POWERS. Well, the county seat towns, Monticello, which is the county seat of Wayne County, that is the first county down from Burnside, and that county seat is not on the river exactly. I do not believe there is a single county seat on the river except Burkesville.

The CHAIRMAN. Along this river?

Mr. POWERS. Along this river. Burkesville is not exactly on it, but right close, and Monticello is pretty close.

As to the timber in this particular section, according to the census of 1910, there were 283,200 acres of standing timber in Clinton County, and 51,367 acres of woodland. Cumberland County had 185,760 acres of standing timber and 95,341 acres of woodland; Monroe County had 86,945 acres of standing timber; Russell County had 80,666 acres.

Through that section of country, which is the largest hardwood section in the entire United States east of the Mississippi River—

southeastern Kentucky is a tremendously rich country; the entire State of Pennsylvania, great as it is, has only about 14,000 square miles of bituminous coal territory in the entire State. Southeastern Kentucky has 10,000 square miles of bituminous coal territory, as large in vein and as good in quality as any found in the entire State of Pennsylvania. The thing we need is an outlet; the thing we need is transportation facilities; the thing we need is a chance to get to the markets of the world. You take it up in Harland County, to illustrate: A few years ago—that is one of the counties in my district—there was not a single railroad touching it anywhere.

Railroads have gone in there since that date, gone up the three forks of the Cumberland, and on the Clover Fork the railroad has gone up 7 miles within the last two or three years, and from Harland, Ky., 7 miles up that fork of the river it is virtually a solid town 7 miles down, just one coal operation on top of another coal operation; and they are stretching it up 7 miles more, and five years from to-day 14 miles up that fork of the Cumberland River will be a solid town. There are six big veins of coal under that mountain, and they are workable veins of coal, some of them 6 or 7 feet in thickness. It is a wonderful country, and it is a wonderful coal territory. I take it \$3,000,000 would not have been expended on the Cumberland below Nashville and \$3,000,000 above but for the fact of reaching this tremendously rich coal and timber country. Are we going to stop; are we going to throw down and quit? We have got to the very point of reaching what we want. Are we going to throw up the sponge and say we will appropriate no further money, or are we going ahead and complete it?

It may not be germane to this subject, but in one of these little counties here, below Burnside, Ky., the late Shelby M. Cullom, the veteran statesman from Illinois, was born; and in the next little county below it, the county of Clinton, produced two governors, one for the State of Tennessee, Gov. Benton McMillin, and Gov. Bramlette, of Kentucky; and another little county just below has the unique distinction of producing one governor for two States, the State of Kentucky and one of the Western States, Montana, I believe—Preston H. Leslie.

The thing the people need is opportunities. The world needs this coal and timber, and I trust you gentlemen can see your way clear to at least put in this bill an appropriation as large as we had in 1914, which carried \$340,000, to buy up these lock and dam sites and to start this very much needed river improvement.

MR. KENNEDY. Mr. Powers, will you allow me to ask you one question?

MR. POWERS. Yes, sir.

MR. KENNEDY. I notice the commerce in 1916 has fallen off very largely. How do you account for that?

MR. POWERS. What are the figures for 1916?

MR. KENNEDY. The figure for 1916, excluding sand and gravel, is 68 tons; the year before 95; the year before that 116; the year before that 120; and the year before that 165.

MR. POWERS. You mean what is the particular thing?

MR. KENNEDY. What is the cause?

MR. POWERS. What is the particular thing to which you have reference?

Mr. KENNEDY. I wanted to know if you knew why the tonnage had fallen off last year?

Mr. POWERS. No, sir; I can not account for that, any more than that. The Rivers and Harbors Board made this statement which might throw some light on that. The Board of Engineers for Rivers and Harbors in the report of February 4, 1914, said this:

That would now indicate that there is a commerce on the upper Cumberland amounting to about 300,000 tons.

Mr. FREAR. That counts sand hauled several miles?

Mr. POWERS. That counts everything in the entire country.

The CHAIRMAN. You will find the commerce discussed in the annual report at page 1207.

Mr. FREAR. I am very much interested. I have read this report before, and quite carefully. What is the reason they have not built railroads up into that section?

Mr. POWERS. Well, sir; I think possibly I can tell you.

Mr. FREAR. It is a very interesting thing.

Mr. POWERS. Our country is peculiarly situated. People of southeastern Kentucky, in the progress of civilization as it flowed through this country, went to the north and the west of us. Along the eastern part of the country is the Allegheny Mountain system, and that was regarded as a barrier to civilization, and there were no way for the people located in southeastern Kentucky to know or to determine the difference in possibilities between that section, with its natural barriers and handicaps, and the Great Northwest Territory, out of which we made the States of Ohio, Indiana, and Illinois; and simply civilization went to the north of us, and flowed that way, and contrary to the usual trend of things it has come eastward into southeastern Kentucky, railroads and things of that character.

Mr. FREAR. I understand why it did not reach there, but now considering the fact that all those coal and various products still remain, or many of them, in that section, why is it now there is not enterprise sufficient to put a railroad in that territory like in the mountainous sections in other parts of the country?

Mr. POWERS. The mountains have been building up wonderfully in railroads. The western part of the State—there are two fields in Kentucky, the eastern part and the western part; the western part heretofore has been the coal section, producing more coal than the eastern, but now the railroads have gone into our country and some of the counties are veritable bee hives of industry. I remember when Bell County, just above me, did not have a foot of railroad in it, my own county did not have a foot of railroad in it, and yet Bell County, just above me, produced last year 3,000,000 tons of coal; it produced more coal than any other county in the entire State of Kentucky.

Mr. FREAR. That is not shipped on the river?

Mr. POWERS. No. Harlan County did not have a foot of railroad in it, and railroads have gone up there and a year or two from now that will be the leading county in Kentucky in the production of coal.

Mr. FREAR. If you had a water way up there it would do that?

Mr. POWERS. The waterway would reach the lower stretch, the railroads the upper; Burnside is in the lower stretches of the district.

This railroad development is in the upper end. This territory I am talking about is the lower stretches of this river that we want water transportation to reach.

Mr. FREAR. One other question: Mr. Powers, you are familiar, because you were a member of the Rivers and Harbors Committee, with this proposition. Why is it they build a lock and dam at one point and then make a jump of possibly 50 or 100 miles and leave the shallower places instead of making a continuous improvement?

Mr. POWERS. The idea is this. You see this is the Q. & C. Railroad running through Burnside; that is the upper stretches of this river, the headwaters of navigation, and when you reach Burnside you reach the railroad and any locks and dams built from the head down the river come up to Burnside and have an outlet, do you not see, just as good as they could at the mouth of the river? That is why they went up there to reach this coal and timber territory.

The CHAIRMAN. Mr. Powers, this modification of the original project for the improvement of the upper Cumberland above Nashville by the construction of locks and dams, which is embraced in the Rivers and Harbors Committee Document No. 10, Sixty-second Congress, second session, is evidently meritorious or it would not have been reported, and the report itself contains facts which indicate merit. Whether the committee can include this modification of the project in this bill or not is as yet uncertain, but it will surely be carefully considered by the committee.

What I wish to suggest to you, with as much emphasis as I can in connection with the upper Cumberland, and which applies to all similar rivers, is this: That the improvement on this river by the completion of this project for the construction of locks and dams will afford a navigable channel, but we have had some illustrations of the proposition that providing a navigable channel does not of necessity mean the establishment of water transportation. There must be also, to mention two essentials, water transportation lines established and maintained, and there must be adequate water terminals along the river at the different towns, cities, and landings, in order that traffic carried by water on the boat may be transferred quickly and cheaply to the warehouse and vice versa. Whether the committee adopts this modified project in this bill or not, or whether it is carried in a future bill, you can not do your section a greater service than by agitating the necessity of all the people there contiguous to this river making preparations to utilize the river when the channels shall be completed. And in that connection I will hand you a copy of the Rivers and Harbors Document No. 4, which contains a letter from this committee to the Secretary of War regarding some essentials of commerce, and to which we respectfully call your attention and ask your consideration of the necessity of preparing to utilize this channel when it shall be completed. It is an expensive project—the modified project itself is estimated to cost \$1,600,000, if I am not mistaken, and we would not be justified in beginning a project of that cost unless we had some assurance that the channel would be utilized and water transportation would be established when it was completed. If you will urge upon the people of that section, and use other intelligent citizens there to cooperate with you,

you will have prepared the way for the committee to act upon this proposition with a good deal more of assurance. We wish to emphasize that and direct your attention to it.

Mr. FREAR. May I just offer a suggestion along the line of what the chairman has said, about the interest of the local community? I simply want to read the last paragraph of the report, Document No. 10, and to give the authority. The engineer there says:

I am not convinced, however, that the United States shall assume practically the entire cost of providing the additional transportation facilities that are needed. In view of the large expenditures already made by the United States for work on the Cumberland River that is necessary to supplement the further work now proposed, I am of opinion that this additional work should not be undertaken except on condition that the States of Kentucky and Tennessee, or the local communities, shall contribute one-half of the estimated cost of construction. Otherwise, I concur in the recommendations of the district officer.

That was signed by Col. Newcomer, who is now advising the committee.

Of course, we are all familiar with that. What I was going to say is, Don't you believe if your communities had shown their confidence in this proposition by trying to make this recommendation and making a contribution that that would have been a way of starting the work long ago? This very fact that the Government is required to "hold the bag," take up the whole proposition and undertake it without any assurance it will be used, as in many cases it has not been used, and that has been the great trouble with some of these river improvements.

Mr. POWERS. I can not speak for anyone except myself. Now, so far as this upper Cumberland is concerned, and the matter you have just read, the local engineer recommended the project favorably. The district engineer indorsed it with the proviso that the people pay half the cost. The Board of Engineers for Rivers and Harbors, and Chief of Engineers of the Army concurred in the view of the local engineer and said the Government ought to pay for the entire project.

Mr. FREAR. That was after nine Congressmen and two Senators had a conference with them.

Mr. POWERS. I was one of the men who appeared. I appreciate what you have said, Mr. Chairman. I think our country is already prepared down there; they have got no other means of transportation; they have got to resort to the river, if anything, and it would be just like me owning the Capitol. If I owned this Capitol, if it had been given to me, and you would say, "Powers, you can hold it. You can not rent, lease or sell it," it would be a dead weight around my neck, because it would be absolutely of no value to me, and the coal and timber in that country has no way to be gotten out, valuable as it is. For a long time it has been a dead weight around the necks of the people of that country for the lack of transportation facilities.

The CHAIRMAN. I was expressing my own opinion. I realize the difficulties here, just as on similar projects of local financial cooperation.

Mr. POWERS. We could not do it all; we would not be able to do it.

The CHAIRMAN. There are no large cities, and any local cooperation would have to come from counties and communities contiguous to the river. It would probably be incumbent upon the States them-

selves, and if the effort was made to induce the State, as a whole, to make financial contribution, it would raise divisions among the people, some in other sections saying they were not sufficiently interested or benefited by it to justify the State as a whole in making contributions. And while not at all minimizing the merit of local financial cooperation, I can see the difficulties involved which might perhaps prove to be insuperable, and if it was ultimately based upon that condition, no matter how meritorious the project might be, the upper river might never be improved. But if the committee could be convinced that this expenditure would result in the establishment of water transportation, and that terminals would be actually established, I believe that would go a long way toward impressing the committee.

Mr. POWERS. I can give you this information on that score, Mr. Chairman and gentlemen of the committee. You take Bell County. As I said a while ago, I remember the time there was not a foot of railroad in it; was not a ton of coal shipped to any point in the United States or elsewhere. Since that date railroads have reached there, had a chance to get out the coal, and it is now the biggest coal-producing county in Kentucky. These people will do what you say if they have a chance.

Speaking to the point made by the chairman about the States doing it: You take the State of Mississippi. Overrun and drowned out, the State of Mississippi, if I remember correctly, has never contributed a copper toward building levees and helping as a State, and has not contributed a cent for the canalization of the Mississippi River down through that entire State.

Mr. KENNEDY. It is hard to get any State to do it, because there is only such a small proportion of its territory interested.

Mr. SWITZER. As I understand, the locks and dams have been practically completed.

Mr. POWERS. Below Nashville, seven locks and dams, maybe eight above.

(See statement of Col. Newcomer, assistant to the Chief of Engineers, United States Army, in hearings on river and harbor bill, Sixty-fifth Congress, second session.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 16, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order.

Mr. BYRNS and Mr. Hull are here this morning and desire to be heard on the Cumberland River, I think. Which one of you gentlemen will speak first?

Mr. BYRNS. Mr. Hull will make the opening statement.

Mr. HULL. All right.

The CHAIRMAN. The committee will be very glad to hear from Mr. Hull.

STATEMENT OF HON. CORDELL HULL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE.

Mr. HULL. Mr. Chairman and gentlemen of the committee, a number of the Members of this House from Kentucky and Tennessee who are concerned are interested in the hearings in connection with this river, both the upper and the lower, as it is called. Several of these gentlemen are detained on other committees and are not able to be present at this time. I think practically the entire membership of Tennessee and Kentucky have been before either the committee here or the Department of Engineers in support of the claims of this river for improvement. I would like to make one remark of a general nature before offering the views I have to offer in connection with this river.

The present transportation and price conditions has arisen gradually out of the war. I think they have very fully vindicated the position which this committee and Members of the House have taken for a great many years with respect to the wisdom and sound policy of developing and improving navigable waterways of the country. The fact that the country has suffered such severe drawbacks as these in connection with the prosecution of the war and the further fact that immeasurable losses have been sustained by the country by the congestion of freight, the cost of improving these waterways, if they had been improved on a broader scale in the past, would have been small compared to the damage and the losses the public and the Government has suffered during the past three years.

I do not know what the present policy of the committee is with respect to dealing with old and new projects. This river is of such importance, not only locally but generally, that we are naturally very anxious to keep in touch with the policy of the committee and to keep the facts of the claims of this river before this committee.

The CHAIRMAN. May I interject this statement at this time? Speaking for myself, I feel very strongly that the interior rivers of the country ought to be improved, and that the country can well expend any amount of money which is necessary to make them navigable, but upon this condition: That when they are made navigable they shall have water-borne commerce, and that all other things that are necessary to protect commerce must be done. I do not think that appropriations are justified by Congress for making and improving channels in a navigable stream simply to reduce freight rates by rail competitive with that river.

I think the primary purpose is to establish water transportation on the river. I think that is the attitude of the committee. I do not think this committee is, in the slightest degree, disinclined to improve our interior rivers. We only insist that water-borne commerce shall follow as a result of the improvements. To that end we, or a majority of the committee, approved a letter addressed to the Secretary of War, several months ago, which has been printed as a committee document, setting forth among other things that there must be established proper lines of water transportation; that, as a general proposition, that must be done by private capital and by corporations properly managed; that there must be water terminals adequate to the demands of traffic at the point of transfer; and that these water termi-

nals are not only necessary for local traffic, but essential for through traffic, to handle all traffic under traffic arrangements between the water carriers and the railroads, for the movement of products partly by water and partly by rail. It is absolutely essential there and also in local traffic.

So, answering the query that was in your mind at the moment, I think I have made a fair presentation of the matter from the standpoint of the committee. This committee believes in water transportation and wants to develop waterways, wherever there will follow, as a consequence, water-borne commerce.

Mr. HULL. That was not exactly what I was referring to, but at the same time it is very pertinent. Fortunately I had read the letter to which you refer, and I am also in frequent conference with other members, and so was aware, at least to a measurable extent, of the views and policy of the committee in that respect, and I subscribe to them most heartily.

We are not advised as to the contemplated policy of the committee with respect to the forthcoming bill, in view of war conditions and the extraordinary expenses for war purposes: we are not advised as to just how far the committee would feel justified in going in considering any old or new item in connection with the forthcoming bill.

The CHAIRMAN. I will be perfectly frank as to that. This is my position, and I think it is the position of the committee: The committee believes that the bill should be restricted to actual necessities. I think it is the purpose of the committee, or a majority of the committee, perhaps unanimously, to agree to all the recommendations for appropriations made by the Chief of Engineers, both for maintenance and for the further prosecution of uncompleted projects. As to new projects, I think the attitude of the committee will be to put the burden upon any section seeking to have the new project adopted, to show that it is such an acute and urgent necessity that it ought to be included in the bill during the pendency of the war.

Mr. HULL. I see. In the light of that situation, Mr. Chairman, I will say just a few words, in a very general way, in regard to the Cumberland River. As to the lower Cumberland, I think we all agree as to its present status and the present allowances that have been made and are unexpended. There is no controversy here or elsewhere as to the merits of that project, I take it, nor as to the present supply of money for its prosecution. The upper section of this river does not come within the railway prohibition you referred to. This section is without any railroad whatever, so that the only outlet they would have would be through this river. This upper river, as it is called, from Nashville to Burnside, Kv., is from 320 to 325 miles in length. For many years some of us have been endeavoring to explain the full facts to the committee and to the Department of Engineers, to get them really to grasp the extent of all the resources of that section. We have always contended that the coal and timber of that section was very much, it being the largest hardwood section east of the Mississippi, in need of being wholly developed. The resources there are comparable, on a smaller scale, to those of Alaska, where the Government is expending \$10,000,000 to extend the railroads. For some time we were unable to impress these facts upon the committee.

As an evidence of the soundness of our contention in that respect, some local people, who had made about \$600,000 in money by private exertion, put every dollar of that into the construction of a little line of railroad projecting right through the center of this section to the Cumberland River, upon the theory, largely, that the river would be locked and dammed by the time that they got the railroad constructed. They have put in over \$600,000, upon the strength of the every contention that we have been making for years, and the Government, in recently taking over the railroads, notified them promptly that they could not under any circumstances agree to leave them out, because they were tapping one of the most valuable coal and timber localities in the country. They have not yet completed the road half way to the river. The cost will be about a million and a half dollars. They have been willing to put every cent they had into a tap line with the view to transporting the timber and coal, outside of the agricultural products, of this locality. They have already sunk and developed some mines in the outskirts of this river district, where hitherto it had been reported by the geologists that there was no coal. They found a most valuable coal vein of some 4 feet in thickness.

The CHAIRMAN. That is bituminous coal, of course?

Mr. HULL. Yes. If this river had been locked and dammed when this war broke out, it would have been filled with barges, carrying down to middle and western Tennessee and Kentucky, and on down the Mississippi to the Gulf ports, all kind of coal, foodstuffs, and lumber, which are supplied by these localities. As it is, the people everywhere are clamoring for those very products, and they are unable to get them on account of freight congestion. That brings home the outstanding and chief contention which we have raised for years in this respect.

Recently the Government has decided to expend \$40,000,000 to \$60,000,000, as Mr. Byrns will tell you, for the construction of a powder plant on this river. The very necessities which they will need are locked up hard and fast just a few miles above, where there is no rail or water transportation. Because of that fact they will be compelled to go to Pittsburgh, or some other distant region, for the products necessary for the construction and operation of this plant. I do not think that Congress, if it is desired to develop this class of territory—and I am not emphasizing the agricultural section, although it is just as rich as the richest agricultural section of our friend, Judge Booher, of Missouri—should adopt a policy that would retard its development. So far as agricultural products are concerned, they do get out a little stuff during the seasons when conditions on the river will permit, but they have to sell it at whatever the price happens to be when they ship. There is a long list of facts which I will not repeat here, but with which, I am sure, the committee is familiar.

As to just what the committee will do during the present emergency, I don't know, of course. This river, this upper Cumberland section, was first adopted by Congress for improvement before the lower section, because of its tremendous undeveloped natural resources. That is not a new project at all. In fact, it is one of the oldest projects with which Congress has ever dealt. It has simply

not been since completed, due to an entire misapprehension of the facts. It was discontinued temporarily in 1906 because the people in the State, through oversight or absent-mindedness, reported only about one-half of the actual commerce on the river. This is an incompleting project. That is not only supported by a most powerful state of facts, on its merits, but it is an incompleting project in the sense that the Government commenced it away back in the eighties and proceeded gradually to prosecute the work, as most work has been done; but, due to negligence on the part of local shippers in reporting commerce, it was temporarily discontinued. It ought to be classed as an old project. It really is one. It can not be properly classed under the head of new projects.

I realize that during the war, while there is such a tremendous draft on the Treasury, that it would not be contemplated that any large appropriation would be made, that is not absolutely essential; but it has seemed to me that the favorable report of the Department of Engineers ought to be adopted by Congress, so that this matter will not have to be overhauled again by the Waterways Commission, in view of the fact that it has been scrutinized from every possible angle since 1886, and approved on every possible occasion, except in 1906, when this situation developed that I mentioned.

The CHAIRMAN. May I direct your attention to one feature in the report of the engineers? There is a recommendation by the Chief of Engineers that the existing project be modified so as to provide for the completion of the canalization of the river between Locks 7 and 21 by the construction of 10 locks and dams, Nos. 8 to 17, inclusive, Lock 21 being the eighteenth of the series at an estimated cost of \$4,500,000, with \$50,000 annually for operation and maintenance after construction, provided that the States, counties and other local agencies shall bind themselves to protect the United States against any and all damages due to overflow and further to be subject to such modification as may be advisable.

The contention has been made before the committee that the condition of local cooperation to the extent of indemnifying the United States against damage from flowage is impracticable. It appears from a reading of the full report recommending this modification that there is merit in the recommendation for local cooperation, and whatever objections there may be to it would arise probably out of the impracticability of making the contribution. What is your view about that? I ask that because, while the committee may not feel free to adopt this modified project in this bill, it is a question which will confront the section contiguous to this river and the Representative in Congress when the committee shall undertake to adopt the modified project.

Mr. HULL. I have of late had this general view in regard to those minor requirements. The General Government has taken over every phase of the navigable streams of the country. The States and localities have virtually nothing left in them except the mere right of easement, under the new policy of the General Government. I have been inclined, in view of that situation, to believe that it is a very bad policy for the General Government, if it finds that a project is worthy of improvement, to cause any complications or delay by requirements which, though very minor as to the amount involved, do

put everybody to the trouble and delay of dealing with the municipal governments and county governments and State governments.

Now, the Cumberland has been locked and dammed up above Nashville for about 125 miles. It is through what would be called lowlands, as distinguished from the highlands along the river above that point. There has heretofore been only a comparatively small number of items of damage arising which have been found to be valid, and the amount is really inconsequential. It will be far less above lock No. 7, because the banks are higher up there. I think it is not the best policy to attempt to hamstring such a meritorious proposition as that by this requirement. The project is meritorious. The Government is collecting off the people three or four billion dollars in taxes, and the States are getting along with \$360,000,000 to \$375,000,000. When the Government takes over a proposition of this kind, the States retain no benefit, no right, except practically the mere right of easement. I think under this new view that it is bad policy to try to put through a waterway proposition on such a qualified basis as is here proposed. I think the Government should take care of the work. I think that is good policy. I think there is no doubt that we have a very meritorious project here, and I do not think it should be laid aside unless the localities agree to pay this damage. That is my honest conviction about it.

Mr. FREAR. May I ask a question?

The CHAIRMAN. Certainly.

Mr. FREAR. I ask it because we have discussed this before. The chairman has spoken about the policy of the committee from his own point of view, and I don't know that I would change his statement; but I wish to state another point. We have appropriated great sums of money for several projects, covering three rivers. A great deal of money is going into these rivers, and we have established that the commerce is not measured anything like the money that has been placed in these rivers. What I am trying to get at is a question of fact. In the last 10 years the commerce on this river has diminished about 70 per cent. That is exclusive of sand and gravel, and timber products. The sand was carried about 10 miles. You speak about timber as forming such an important part of the resources of that section. The report shows that timber shipments on the river have recently decreased to 39,000 tons or over two-thirds. In the engineers' report for 1917 the general statement appears that the upper Cumberland has been depleted of the best timber. They say that the best timber has already been taken from the upper Cumberland River. If that is correct, how will there be any increase in commerce from the timber resources of the upper Cumberland? We have spent over \$6,000,000 on the Cumberland River, and we have received something like 68,000 tons of miscellaneous commerce for a short haul. That is taken from the report, on page 1206. We are paying \$60,000 for annual maintenance. On that basis, we will be paying \$1 a ton for maintenance, unless there is an increase in commerce, and we will have \$6,000,000 in all. Under the facts as stated, can it be fairly said that this is a project that calls for immediate improvement?

Mr. HULL. I have never been able to agree with my friend, Mr. Frear, in his calculation. I made an analysis of the figures and the result of my analysis—this was a year or two ago—was that they

differed very radically from those of Mr. Frear. My best answer to the general objection is this, and I referred to that in the beginning, that if seven or eight citizens of business judgment are willing to put every dollar they have made during their lives—\$600,000—into a little tap-line railroad to run out of this section to the river, and if they borrow \$600,000 more to put into it on account of the permanent commerce which they believed this road would be the agency of creating for the purpose of carrying it to the river, in the main, if they are willing to do that upon their judgment, based upon personal observation of these resources, I think it is the most concrete and complete answer I could make to the gentleman. They know what is there. Of course, along the river banks the best timber has been taken. There is no doubt about that. But the timber along the banks of this great river is the smallest quantity in that immense domain, which is 140 to 150 miles wide and 100 miles long. It is the interior of that district which we are seeking to develop.

Mr. FREAR. I want to be perfectly fair. These are not my figures that I have quoted. They are taken from page 2820 of the present engineers' report.

Mr. HULL. We both undertook to go to the same source, but we differed in our analyses.

Mr. FREAR. This is their analysis, not mine.

Mr. HULL. If I could find the figures I made in analyzing the commerce of the upper and lower river, and as to the kinds and length of haul of the different items, you would find that they differed very radically from the conclusion of my friend from Wisconsin. I would be glad if I can locate them to insert them in the record.

The CHAIRMAN. There will be no objection to that.

Mr. BOOHER. There has been something said about sand and lumber. What is the sand and lumber shipped for? What is it used for?

Mr. HULL. It is shipped for every necessary purpose. It is very necessary, as it is used for a good many commercial purposes. I have noticed that my friend from Wisconsin has treated lumber in a rather unfair way. He has treated it as if it were rather unimportant. I think that even he may live long enough to realize that lumber will be the most important and the most high-priced and valuable material that will be shipped, whether over a river or a railroad line. It is getting that way now.

Mr. BOOHER. I want your opinion in the record as to that. What are the lumber and sand used for that are shipped from this river? Is it a bona fide article of commerce, or is it used by the people after it is shipped?

Mr. HULL. Undoubtedly it is an indispensable article of commerce. That just illustrates this section to which I have referred, and the rule is general where there is no other transportation facilities. They undertook at one time to turn out every kind of spokes and staves and handles and cross-ties and other kinds of lumber products and ship down river, but they soon discovered that unless there should be regular periods of shipment or transportation they could not proceed with the business in that section, and had to quit.

Mr. BOOHER. Then sand and lumber are considered by your people down there as legitimate articles of commerce?

Mr. HULL. They are legitimate and absolutely necessary.

Mr. BOOHER. That is what I wanted you to say. I do not know whether it is the habit down in your country to use sand for sand bags, but they did use them up in my country. Now no sand bags are used in building any kind of building. It is done by Missouri River or Key River sand. Yet we meet the objection every once in awhile of excluding sand and lumber in these calculations. We do not build a building entirely out of concrete or stone or brick. We use a great deal of lumber. It ought not to be excluded from your calculations.

Mr. HULL. Undoubtedly not. According to the philosophy of our friend, Mr. Frear, we should discontinue our railroad construction in Alaska. They had large resources in that country, but they could not get their products out. There could be no commerce without the railroads. It is the same situation down here. The commerce is locked up above dam No. 7. These locks come to the railroad, but they stop as do the railroads at the very border line of this great domain and leave it without any line of transportation. I think this presents a very strong reason for favorable action whenever Congress feels justified in dealing with the matters in its class.

Mr. FREAR. May I ask a question?

The CHAIRMAN. Certainly.

Mr. FREAR. I am not presenting my own views on the subject. I am trying entirely to find out your views. Do you believe that on a river that has been improved by the Government 325 miles, with something like \$7,000,000 spent on improvements, and sand is hauled by the owners 10 miles—that is what this report shows—do you think that that sand commerce depends to any considerable extent upon the construction of this new \$4,500,000 canalization dam proposition? Take the case of the Missouri River, which my friend, Judge Booher, has mentioned. Do you believe that where nine-tenths of the sand is hauled one-half a mile on the Missouri River by the owners, that that sand is properly included in the commercial statistics of the Missouri River?

Mr. HULL. If the gentleman would give some thought and some attention to other articles that are hauled, and those hauled longer distances, and give them the same importance that he seems to give to sand, I do not think he would—if I may be pardoned for saying so—stake quite so much on the sand proposition; but my friend unconsciously overlooks some of the merits of the long hauls and the large and valuable commerce which they represent.

Mr. FREAR. My questions arose from the figures given in the engineers' report. I took only the logs, not the lumber. These logs were rafted down the river. My information is that the canalization of rivers, and especially locks and dams, interfere with, instead of make better, the movement of logs in a stream. Lumber men have told me that that is their experience.

Mr. HULL. That is a different business.

Mr. FREAR. Yes.

Mr. HULL. The rafting business has reached a stage where it is very damaging and very injurious to undertake to utilize a muddy river to float down all kinds of manufactured lumber or timber. There is injury to it, and sometimes it is so great that, except in

cases of extreme necessity where the dangers and losses are of necessity ignored in the face of the necessity, they do not use the river or this purpose. It is only to a limited extent that they do that. Only a limited number of rough, unhewn logs would be floated down the river, because any other kind of lumber than that would be subject to considerable damage. A great deal has been transported in the past; they put in crossties and spokes and handles—practically in muddy water—but to their great injury, and floated them down the river. That is not a fair criterion, I think, to base this matter on at all.

Mr. BOOHER. The gentleman from Wisconsin, when he asked you about sand and lumber, I think, did not use the word "logs" but the word "lumber." The very report from which the gentleman read, on page 2812, divides logs and lumber. It says "logs towed in barges," etc., and treats of timber separately. The logs are rafted there, under that head. The lumber is towed in barges. Then comes another head—lumber towed in barges and lumber rafted. So it is regarded as a different article of commerce.

Mr. HULL. Yes. I undertook to deal with these distinctions in preparing my analysis a year or two ago.

Mr. FREAR. Page 2799 I have been reading from.

Mr. HULL. Mr. Byrns is here now.

Mr. OSBORNE. What is that sand used for?

Mr. HULL. Perhaps Mr. Byrns can tell you about that better than I, because it is in his district near Nashville, and you would probably rather have him tell you, because he knows more about it.

STATEMENT OF HON. JOSEPH W. BYRNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE.

Mr. BYRNS. I am going to claim the indulgence of the committee for only a moment. There is nothing I feel that I can add to what has been said. All that Judge Hull has said is heartily indorsed by me, and I want to emphasize it strongly, as I am very much impressed with the importance of the development of the Cumberland River.

As I understand the report of the engineers, they have enough money on hand for next year to carry on the construction of Locks E and F, which will complete the lower Cumberland River project, and it will not be necessary to make an appropriation for the lower Cumberland River in the next bill.

Bearing in mind the suggestion made by the chairman to Judge Hull a moment ago with reference to the views of the committee on the question of the improvement of the rivers, that it ought to be looked at from the standpoint primarily of water-borne transportation rather than in relation to the reduction of freight rates; and I wish to say to the Committee that the improvements which have been recommended for the Cumberland River, or which have been made on the Cumberland River, have borne fruit; that the money expended has not been expended in vain. Take the town of Clarksville, of about eight or ten thousand inhabitants, on the lower Cumberland River.

Only last summer it purchased a boat to be operated by the city. It expects to run that boat on the lower Cumberland river, its pri-

mary object being, of course, to serve the city of Clarksville. The citizens of Nashville have subscribed quite a liberal sum for the purpose not only of increasing the present water terminals at Nashville, but also for the purpose of putting in a line of boats which will ply not only on the lower Cumberland but also on the upper Cumberland, with the expectation that Congress is going to complete this work of improving the Cumberland River and put it in navigable condition the year round. The trouble that my friend Mr. Frear gets in when he comes to talk about the commerce as being carried upon the lower Cumberland River—

MR. FREAR (interposing). It is the upper river I am discussing.
MR. BYRNS. The Cumberland River. The trouble he gets in is that he overlooks the fact that, owing to the position taken by Congress twenty or thirty years ago, when this improvement was first started, they began the improvement of the river at Nashville, almost midway between the mouth and the head of navigation. The result has been what you might call a still-water canal. He speaks of the fact that we now have 325 miles of improved river. That is not true at the present time. We hope to have 325 miles in the course of a year or two, when the project on the lower Cumberland is completed. The result has been that we have a still-water channel, with no outlet to the Ohio River. Neither has it extended up into those rich sections of coal and timber of which Judge Hull has already spoken.

I can not add anything to the knowledge of the committee with reference to the amount of coal and the amount of lumber and timber that lies in this upper section. As Judge Hull says, the trouble is that all these resources have been locked up, because there is no way by which they can be gotten to market. If we had had this particular section improved during recent years, there would have been enough coal to supply the entire region—western Tennessee and western Kentucky and all the territory down to the gulf ports on the Mississippi River. We have been expecting, I am frank to say, that when the lower Cumberland River was completed—and it is now practically completed, since we have enough money almost to complete it—that this committee would look favorably upon a further development of the upper Cumberland River, in order to tap this rich section. In view of recent developments, I think that the improvement of this upper section of the Cumberland River amounts now to a governmental necessity as well as one in the interest of getting these products to the markets. Only a few days ago the War Department announced that they intended to establish a powder plant costing several million dollars—\$45,000,000 to \$60,000,000—about 16 miles above Nashville. The land has been purchased, the deeds have been registered, and the question of construction has been turned over to a gentleman who yesterday stated he would be in Nashville in a week or 10 days to look over the situation, and then would let a contract for the construction of this immense powder plant.

Here are products on the upper Cumberland River which will be badly and sorely needed by the Government, as Judge Hull suggests, but which are inaccessible owing to the fact that these products are now locked up by want of transportation facilities; and it may be necessary because of that fact to bring these products from as far away as Pittsburgh, at an immense cost to the Government.

I simply wanted to make a few remarks in regard to those facts and to ask this committee to look at the proposition of improvement, realizing not only that these are very valuable products in which the public is interested but also realizing the fact that the Government now needs these products for its own particular purpose; for this powder plant is going to be permanent. It is to be the second largest plant in the world. I want to indorse very earnestly and very heartily all that has been said by Judge Hull in regard to the necessity of making the improvements on this river at the very earliest possible moment.

The CHAIRMAN. Just this thought, which seems to me to be pertinent here. Mr. Byrns, I would just like to add this brief observation. You and Judge Hull have certainly presented very clearly the commercial merits of the Cumberland River; but may I direct attention to this thought; the people have heretofore, in discussing the improvement of rivers, particularly our interior rivers, stressed almost exclusively the improvement of the river to the neglect of some other essentials that are necessary in order to develop water-borne commerce, that is to say, the necessity of maintaining water transportation lines and the necessity for providing adequate water terminals for the quick and expeditious transfer of traffic between the water carriers and the warehouses and these water terminals to existing lines of railroads, in order that the railroads and water carriers may be coordinated and become great through highways of commerce, leaving to these waterways the business of tapping the interior country, making the improved waterway accessible to it.

That neglect on the part of the people to stress these other essentials has of necessity been somewhat reflected by us as Representatives in Congress in discussing the improvement of waterways; so that the persons who are of necessity the leaders of public thought would, in a discussion with our constituents, direct their attention to the fact that an improved channel alone does not make for water-borne commerce, but there are other things to be added, which are of necessity, in large degree, if not exclusively, incumbent upon the locality and the city that would expedite the formation of a more intelligent public sentiment and thereby help to increase water-borne commerce upon these rivers.

Mr. BYRNS. I quite agree with you, Mr. Chairman, and it was to meet that idea that I stated that the business men of Nashville—I was present at one of their meetings last fall—have subscribed most liberally with the view of establishing a line of boats which will ply the upper Cumberland and the lower Cumberland, and also for the purpose of improving the water terminals at Nashville. At that meeting I may say that steps were taken to interest the people in the small towns all along the Cumberland River and to bring about cooperation on their part with a view to providing proper terminal facilities at their respective towns and villages. It is impossible to meet the conditions which Mr. Frear lays down with reference to any particular river, so far as commerce is concerned, until the river is improved.

You can not get a line of boats permanently established until the improvements are made and there is provided some outlet for boats the year around. I am satisfied that when the lower Cumberland is completely canalized there is going to be a decided showing with

reference to increased commerce. But, as Judge Hull has said, the main point now is the improvement of the upper Cumberland River, because there lie the rich products of coal and timber, and there is absolutely no outlet for all that rich country, and there will never be until this section is given all-the-year-around navigation.

Mr. FREAR. In order to make the record right, I desire to quote from page 1203 of the engineers' report, that this project was begun in 1876. Let me say I may be the only one who occupies the position I do, and yet I have no hesitation in maintaining those views, because, notwithstanding the fact that \$50,000,000 may be placed in this river at this point by the Government, my thought is that if this is a meritorious project, we should get commerce commensurate with the amount expended. From the facts shown in the reports I fail to find that we will get a commerce anywhere commensurate with the amount it is proposed to expend. I quote from the engineers' report, on page 1204, an explanation which shows the impracticability of carrying on navigation on that river; that is, to the extent hoped for by those who have spoken. The language is as follows:

The extreme fluctuation in the stage of the river varies from about 40 feet to about 63.5 feet at different localities. Fluctuations below extreme high water are so variable that it is impracticable to enter a stage commonly referred on other streams as ordinary high water.

Now, that I may not be misunderstood, let me say this, that since improving this river, since 1876, and since expending this great amount of money that we have placed in there, we find from the engineers' report before us that the actual commerce, taking out the sand hauled 10 miles, has decreased 70 per cent. The answer to that is made, if you will improve this stream and complete terminals, that condition may be remedied. But we have spent \$100,000,000 on the lower Mississippi River without any result commensurate with the amount expended, compared with what there was 30 years ago, when the commerce was nearly ten times as large. What can be gained by the expenditure of \$4,500,000 in these locks; that is, what can be pointed to, in the light of this report, that leads us to believe or hope for commerce in the future which will bring a return commensurate for the outlay?

Mr. BYRNS. We can only judge of the probability of what the commerce will be on that river after it is improved, in the light of these vast undeveloped resources that have only been waiting for transportation for their development. I might call your attention to this fact: Lock A, the first lock on the lower Cumberland, is situated about 21 miles, if I mistake not, north of Nashville; it was completed in 1904. There were no further improvements on the lower Cumberland River until 1910. I believe it was, when an appropriation was made for Lock B. That lock was put in last year. Lock C will probably be in operation this fall. Up until last year there was a section of this river which was what you might call the central part of the navigable portion of the river, consisting of about 125 miles, extending from Lock A 20 miles north of Nashville, and below Nashville, to a distance of about 120 miles above Nashville. That is all the improvement that had been made up until last year, when Lock B was opened, with the exception of Lock 21 at the head of navigation.

Mr. FREAR. They kept the channel open?

Mr. BYRNS. If the gentleman will read from—

Mr. FREAR (interposing). You are talking about the canalization project?

Mr. BYRNS. About the canalization project, yes; but if the gentleman will examine the report he will find that there are portions of the year, covering a period of several months in the summer, when it is impossible to navigate that stream.

Mr. FREAR. That is true of many rivers, even where they are canalized.

Mr. BYRNS. With these locks and dams we will have 6 feet of navigable river the year around. You can not expect boats to go into a river as a permanent line unless they have some assurance that they can navigate it the year around; and certainly, with the situation we have been in, so far as the Cumberland River is concerned, with only about 125 miles of improvement, you could not expect any extension along that line.

Mr. FREAR. We have the same trouble with our ice in the North. It closes navigation for several months annually. The boats do not necessarily depend on 12 months of navigation. They take whatever may be the conditions afforded by the climate.

Mr. DUPRÉ. The recommendation for the upper Cumberland is what amount?

Mr. FREAR. It calls for \$4,500,000.

Mr. DUPRÉ. What does it say in that report about the amount subscribed?

Mr. FREAR. In this report last year—the report is that the people there should subscribe one-half of the amount. That report was changed. They went before the board—there were 11 members of Congress who presented a persuasive argument that changed the report.

Mr. DUPRÉ. I thought that was the Tennessee River.

Mr. FREAR. That is the upper Cumberland. There were nine Members of the House and two Senators. The report was changed—the recommendation first requiring a contribution.

Mr. DUPRÉ. What is there in this report—does that recommend anything?

Mr. FREAR. Which report?

Mr. DUPRÉ. The engineers' report.

Mr. FREAR. No contribution now. It is all wiped out.

The CHAIRMAN. There is an estimate of \$5,000 above Nashville. There is no estimate below Nashville.

Mr. BOOHER. In connection with what I said, on page 1206 of the last annual report of the engineers there is this paragraph on the effect of the improvement:

The completion of Lock No. 21 has caused a reduction in freight rates of about one-half within this pool area. Locks Nos. 1 to 7 have caused a reduction in railroad freight rates between Nashville and Carthage, 115.8 miles, and in river freight rates between Nashville and West Point, 125.2 miles. (For detailed statement see annual report for 1913, pp. 2480-2481.)

Mr. BYRNS. You will find, Mr. Booher, a similar statement with reference to the improvement of the lower river to Lock A. There has been a statement of this positive relief carried in the report for several years. Lock A was completed in 1904.

Mr. BOOHER. There has been some benefit to some people, at any rate, in the reduction of rates. I think the Interstate Commerce Commission, or whatever people are responsible for better commerce arrangements, should take cognizance of such matters. Whenever you get the commerce, the railroads reduce the rates; and you can not get the commerce—

Mr. BYRNS (interposing). We can not get the commerce because we haven't the transportation facilities.

Mr. BOOHER. Reducing freight rates just at these places does not seem to me right. When they reduce the rates the people farther away ought to have the same benefit in reduced rates as the people living right there.

Mr. FREAR. Is not this true? When you reduce rates for a particular locality, the locality gets the benefit, but the railroad has to make up the reduction caused by the benefits accruing to those favored people through the lower rates. Reductions have to be made up by overcharges in other localities. For that reason the railroads have come before the Interstate Commerce Commission and Congress, asking for increased rates, generally. In spite of this fact, however, in making these estimates, that was the theory upon which these improvements were recommended—reduction of freight rates for a particular locality. Do you believe it is right or just to favor a particular locality by an investment of Government money, when the rates must necessarily benefit only the people of a community?

Mr. BYRNS. The gentleman is assuming that the rates referred to by Mr. Booher are too low.

Mr. FREAR. Because they are, absolutely. The railroads have been making repeated application to the Interstate Commerce Commission to raise their rates.

Mr. BYRNS. I think that is an assumption that may not be borne out by the facts in every case.

I could detain the committee much longer than they would be willing to be detained, if we went into a discussion of freight rates in my section of the country. There has been a complaint on the part of many for a long time that, due to not having any great number of competitive lines of railway, we have been at the mercy of the railroads which come into Nashville and operate in that section of the State, in the matter of freight rates; and the improvement over the short distance on the Cumberland River has been the only factor to which we could appeal as an argument for the lowering of the freight rates. That is a question however which does not arise here and need not be discussed.

Mr. FREAR. Did that reduce the rates 30 miles from the river or 50 miles from the river, or was that only for a few river points where this assumed river competition exists?

Mr. BYRNS. I understand it has an indirect effect upon the rates, as you say, to 30 or 50 miles from the river.

Mr. FREAR. Somewhere that reduction has to be made up, because the railroads need higher tariffs at the present time according to their contention.

Mr. BYRNS. That may be true of the rates at the present time, and it is a matter open to discussion as to whether or not they are unreasonably low. I am not prepared to give an opinion on the subject, since I have had no opportunity to know all the facts.

Mr. DEMPSEY. Don't you think that the transportation of freight is of more pressing importance at present than the rates at which it is transported? And should not there be power to regulate lower rates so that transportation on water lines can exist and live?

Mr. BYRNS. I do.

Mr. DEMPSEY. Isn't it really a transportation question, and not one of rates?

Mr. BYRNS. Precisely; and that is the proposition I wished to present to the committee. It is the necessity of transportation that we have down there on the Cumberland River which demands this continued improvement.

Mr. FREAR. That suggestion has been taken up by the chairman, let me say, in regard to rates; and the proposition is that railroads be required to raise their rates so as to permit boat traffic to exist upon the river and to carry lower classes of freight at a profit. Of course, boats can not do that where railroad competition exists as it does on the Mississippi and other rivers. Whether or not that theory will work out for particular communities may be another question.

Mr. BYRNS. In the last analysis, you would absolutely stop improving rivers?

Mr. FREAR. Oh, no; just the contrary. The purpose is to enable boats to live on the river; that is, to raise rates so that the destructive competition on traffic will not continue.

Mr. BYRNS. I want to again refer to the fact in order to meet the suggestion made by the chairman, that the citizens of Nashville have taken hold of the proposition of developing water terminals, and also developing lines of transportation upon the Cumberland River. I do not know just how much they have subscribed, but it mounts up to many thousands of dollars, for the purpose of putting in a line of boats and for the purpose of improving our water terminals; and I feel that the action and example set by the city of Nashville will create a sentiment all along the Cumberland River to take similar steps. The example has already been set by the city of Clarksville, as I have said before. When the people understand that this river is going to be improved and that an outlet will be provided for their products, these terminals will be forthcoming.

The CHAIRMAN. That is a very encouraging feature.

Mr. DEMPSEY. Isn't it the underlying principle of the interstate commerce act that there shall be equality of rates and that inequality shall not be permitted? And is there, therefore, any reason for being tender with the communities adjoining waterways by seeing to it that they get reduced rates on the railroads—rates that are unequal—in contravention of the underlying and basic principle of the interstate commerce law?

Mr. BYRNS. I don't think there should be the slightest tendency to show any community what you have been pleased to call tenderness. I don't think Congress is called upon to do that. The Interstate Commerce Commission has the power, as you say, and it is its purpose, as I understand it, to equalize rates.

Mr. FREAR. If the Government appropriated this amount of money, would it be proper for the Government to reduce its freight rates for the communities along the river?

Mr. DEMPSEY. We have been talking about railroads and not about boat rates. The communities along the river will get the benefit of the decreased rate in water transportation and not in the decrease of the rail rate. Isn't that what you had in mind?

Mr. BYRNS. Precisely.

Mr. FREAR. The reduction of railroad rates was forced by reason of the improvements made upon the river. If that is so, do you claim, as a matter of fact, that there is any justice or right in the Government's going in there and making this investment in order to bring down railroad rates along the river? That is the question that brought up this discussion.

Mr. BYRNS. I did not say that.

Mr. FREAR. You did not suggest it, I know.

Mr. BYRNS. No. I mean that this river should be developed for the development of the resources of that section, not only for the people who live along that river but or the entire country.

Mr. DUPRÉ. I do not see that because a town is on the river it should not get the advantage of that fact. You gentlemen all know that some cities and towns are more advantageously located than others. The fact that a city is founded in the interior is the affair of those who built the city there and the people who live there; and if they live in a favored community where they have the advantages of both rail and water transportation, they should be entitled to that advantage in location.

Mr. FREAR. In this proposition the Government taxes the individual to raise the money with which to improve this river. The Government thereby taxes the individual who lives away from the community for the benefit of the community where this improvement is to be made. Then it taxes the unbenefitted taxpayer again by raising his railway rates. Why should this be so? I do not see how you can get away from that proposition.

Mr. BYRNS. The gentleman is assuming that the people in the interior will derive no benefit from the improvement of a river and the development of the resources contiguous thereto.

Mr. FREAR. I am speaking purely of the question of rates.

Mr. BYRNS. I think both questions have to be considered together.

Mr. FREAR. I can see that the other has a relation to it, of course.

Mr. DEMPSEY. I am not talking about railway rates but the rates on the waterways themselves; and I wanted to point out that the reduced rates that would come to communities situated upon the waterways would be proper—such rates as would be fair and reasonable as water rates.

Mr. FREAR. There is no question about that.

The CHAIRMAN. If there is no further question on the Cumberland River project, we will hear from Col. Newcomer.



9

LAKE ERIE & OHIO RIVER CANAL

HEARINGS

ON THE SUBJECT
OF THE

CONSTRUCTION OF A CANAL CONNECTING LAKE ERIE AND THE OHIO RIVER, OHIO AND PENNSYLVANIA

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.
WILLIAM E. CLEARY, New York.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

SAMUEL S. MANN, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

MAY 9, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

LAKE ERIE & OHIO RIVER CANAL.

COMMITTEE ON RIVERS AND HARBORS, HOUSE OF REPRESENTATIVES.

Thursday, May 9, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee has been called together to consider H. R. 9927, a bill to provide for the construction of a waterway from the Ohio River to Lake Erie, introduced by Mr. Campbell of Pennsylvania, reading as follows:

[H. R. 9927. Sixty-fifth Congress, second session.]

A BILL To provide for the construction of a waterway from the Ohio River to Lake Erie.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War, in order to provide a continuous navigable interior waterway between the Mississippi and Ohio Rivers and the Atlantic coast for the movement of munitions of war and small warships, as well as of general interstate and foreign commerce, is hereby authorized and directed to proceed with the construction, under the supervision of the Chief of Engineers, of a waterway from the junction of the Ohio and Beaver Rivers in the State of Pennsylvania, and the Mahoning River in the State of Ohio, to a point in Trumbull County, at Niles, Ohio, with only such departures from the channels of said rivers as may be necessary to eliminate unnavigable curves; thence following generally the valley of Mosquito Creek to a point in Trumbull County approximately two and five-tenths miles southwest of the village of Cortland, Ohio, which point is the southerly limit of the summit level of the proposed waterway; thence in a course almost due north across said summit level to a point about two miles east of Rock Creek, Ohio, which point is the northern limit of the said summit level; thence by the valleys of the Grand River and Indian Creek to a point at or near the mouth of Indian Creek, on Lake Erie, in the State of Ohio, together with all such branch canals, locks, dams, tunnels, aqueducts, feeders to supply water from any lakes, rivers, streams, or water courses, docks, harbors, reservoirs for the supply of water for the waterway or its feeders, or for the regulation of stream flow, basins, piers, quays, bridges, viaducts, sidings, offices, lock houses, telegraph and telephone lines, power plants, and all other structures, appliances, or devices of any and all kinds which may be necessary or convenient for the proper construction, maintenance, and operation of said waterway and the utilization of the surplus water that may result from the construction and operation thereof.

Whenever the words "waterway and appurtenances" are hereafter used in this act, they shall, unless otherwise explained by the context, be deemed to refer to and include the waterway and all the works described in this section.

The said waterway shall have a depth of not less than twelve feet over miter sills, with locks having a width of at least fifty-six feet and a length of at least four hundred feet. The bottom width of the waterway shall not be less than one hundred and forty feet and its surface width not less than one hundred and eighty-eight feet.

Sec. 2. That the Secretary of War is hereby authorized, empowered, and directed to do or cause to be done all things necessary or proper for the construction, completion, and installation of the said waterway and appurtenances, and in the exercise of his said authority the Secretary of War may enter into all such contracts and agreements, acquire all such materials, lands, waters, property, and rights of any and all kinds as may be necessary for the completion of the works herein authorized.

If the necessary materials, lands, waters, property, or rights can not be acquired on reasonable terms, then the Secretary of War shall cause proceedings to be instituted in the name of the United States in the district court of the United States for the proper district where the said property or rights are located for the purpose of acquiring by condemnation in perpetuity any materials, lands, waters, rights, rights of way, highways, bridges, buildings, structures, or other property or rights of property, whether devoted to a public or private use which may be necessary for the completion of said waterway and appurtenances; the practice, pleadings, forms, and modes of procedure in causes arising under the provisions of the act shall conform as near as may be to those existing at the time in like causes in the courts of record in the State where the proceedings may be instituted and there used for the condemnation of property for railroad purposes.

The Secretary of War is also authorized to accept donations of such materials, lands, waters, property, or rights of property of any and all kinds as he is authorized to acquire under the provisions of this act and to receive releases of damages that may accrue in the construction, operation, or maintenance of the works herein provided for.

SEC. 3. That upon the completion of the works herein authorized the Secretary of War shall exercise on behalf of the United States the control and management of the said waterway and appurtenances, and the said waterway shall be open to the use and navigation of all suitable and proper vessels or other water craft upon fair and equal terms, conditions, rates, tolls, and charges; and the Secretary of War is authorized and directed to demand and to recover from all persons and things of whatsoever description transported upon or using the said waterway and appurtenances just and reasonable charges, rates, and tolls to be fixed by the Secretary of War and approved by the Interstate Commerce Commission. All such charges, rates, and tolls shall be equal to all persons, vessels, and goods under certain classifications to be established by the Secretary of War and approved by the Interstate Commerce Commission.

SEC. 4. That it shall be the duty of the Secretary of War to prescribe such rules and regulations for the use, administration, and navigation of the said waterway as in his judgment the public necessity may require. Such rules and regulations shall be placed in conspicuous and appropriate places for the information of the public, and every person and every corporation which shall violate such rules and regulations shall be guilty of a misdemeanor, and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding \$500, or by imprisonment, in the case of a natural person, not exceeding six months in the discretion of the court. Such rules and regulations may include additional rules approved by the Lighthouse Board for the security of navigation, so that all parties owning, occupying, or operating bridges over said waterway should be required to maintain at their own expense, from sunset to sunrise throughout the year, such lights on their bridges as may be required for such security of navigation.

SEC. 5. That bridges and other like structures for the crossing of said waterway shall be subject to the authority of the Secretary of War appertaining to bridges over navigable streams, and whenever the Secretary of War shall approve plans for a bridge or like structure for the public accommodation in the crossing of said waterway, he may in his discretion and subject to such terms and conditions as in his judgment are equitable, expedient, and just to the public grant to the person or corporation owning such bridge a right of way across the lands belonging to the United States on either side of and adjacent to said waterway, and also the privilege of occupying so much of said lands as may be necessary for the piers, abutments, and other portions of such bridge or structure and approaches.

SEC. 6. That there is hereby appropriated, out of the money in the Treasury not otherwise appropriated, the sum of \$65,000,000, or so much thereof as may be necessary, to be expended under the direction of the Secretary of War and the supervision of the Chief of Engineers, for the purpose of constructing, completing, and installing the waterway and appurtenances herein authorized.

As Mr. Campbell is the author of the bill, I will ask him, or someone he may designate, to indicate the order in which the gentlemen present will be heard. Perhaps Mr. Campbell would wish to make a few introductory remarks.

STATEMENT OF HON. GUY E. CAMPBELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA.

Mr. CAMPBELL. Mr. Chairman and gentlemen of the Rivers and Harbors Committee, the congestion that prevails throughout the Ohio Valley, which is affected by the Lake Erie & Ohio Ship Canal as proposed in this bill, is well known throughout the country. As the Director General of Railroads recently took over the Erie Canal, and has shown friendliness to the encouragement of canal construction, we deem it an opportune time to press this measure, and I would like to present to you a man who has studied all phases of the canal question and who is thoroughly conversant with it and quite capable of enlightening the committee by giving you information which will enable you to act intelligently along the lines of the proposed bill. I will therefore take pleasure in introducing to you Mr. W. H. Stevenson, president of the Lake Erie & Ohio River Canal Board, and a member of the Pittsburgh Chamber of Commerce.

STATEMENT OF MR. WILLIAM H. STEVENSON, PRESIDENT OF THE LAKE ERIE & OHIO RIVER CANAL BOARD AND MEMBER OF THE BOARD OF DIRECTORS OF THE PITTSBURGH CHAMBER OF COMMERCE.

Mr. STEVENSON. Mr. Chairman and gentlemen of the committee, as a preliminary statement I would like to read the names of the organizations represented here for the information of the committee:

The Pittsburgh City Council, represented by President J. S. Herron; Mr. P. J. McArdle, W. Y. English, W. H. Robertson, and John H. Dailey.

The Chamber of Commerce of Pittsburgh, represented by Mr. John E. Shaw and W. H. Stevenson.

Allied Boards of Trade of Allegheny County, represented by Dr. A. L. Lewin, president.

County Commissioners of Allegheny County, represented by Mr. Gilbert F. Myer.

Iron City Central Trades Council, represented by Mr. Charles Miller and Mr. James Norton.

The Pittsburgh Commercial Club, represented by Mr. J. Ralph Park.

The Civic Club of Allegheny County. They have acted on this bill and indorsed it.

The Pittsburgh Real Estate Board is represented by Mr. John E. Kane.

The Pittsburgh Harbor Masters, Mates, and Pilots' Association has favorably passed upon this bill, but their representative was unable to come to-day.

The Builders' Exchange of Pittsburgh.

The Oakland Board of Trade.

The Lawrenceville Board of Trade.

The North Side Federation of Boards of Trade.

The East Side Business Men's Association of East North Side.

Beaver County Manufacturers' Association, represented by Mr. F. N. Beegle.

The Beaver Falls Chamber of Commerce.

Beaver County Commissioners, Judge J. Sharpe Wilson.

Youngstown Chamber of Commerce, represented by Mr. A. E. Adams.

The Wheeling Commercial Association.

The Ohio Valley Improvement Association.

The West Virginia Manufacturers, represented by Mr. William U. Follansbee, who is also a member of the Lake Erie and Ohio River Canal Board.

The Ohio Valley Improvement Association.

The Pittsburgh Coal Operators, represented by Mr. John H. Jones.

The Lake Erie and Ohio River Canal Board of Pennsylvania, represented by W. H. Stevenson, John E. Shaw, W. U. Follansbee, and F. N. Beegle.

Mr. B. S. Patterson, Secretary of the Lake Erie & Ohio River Canal Association.

Col. H. W. Stickle, United States Engineer officer at Pittsburgh.

These organizations have a total membership of about 20,000 business men and 150,000 workmen.

The reasons for the introduction of this bill, Mr. Chairman, are that a letter was written to President Wilson from the Lake Erie & Ohio River Canal Association, dated December 11, 1917, which was by him promptly referred to the Council of National Defense, which in turn forwarded it to the council's committee on inland water transportation. On December 15 the secretary of that committee wrote to the secretary of the Lake Erie & Ohio River Canal Association as follows:

In connection with your proposals I desire to say that the claims of the Lake Erie & Ohio River Canal Association are well known to this committee as well as to the Office of the Chief of Engineers, United States Army, and that there is no possibility of taking up the matter of the construction of this canal until Congress has affirmatively adopted the project. Your efforts should, therefore, be directed to secure from Congress such legislation as may be deemed advisable in order that the construction of your canal may be begun and pressed vigorously to a conclusion.

This subject is as old as the hills; it is as old as anything we know about the hills of western Pennsylvania, because Gen. George Washington first conceived the idea of the Lake Erie & Ohio River Canal, and as he planned a route for it substantially the same as that now selected the project may well be denominated the Washington waterway. His objects were to promote the defense of the Nation in times of war and to expedite its commerce and trade in times of peace. These also are the objects sought by those who are advocating the immediate construction of this waterway at the present time.

Full details as to the history, route, dimensions, feasibility, necessity, cost in normal times, probable traffic, and type and speed of boats of this proposed canal, together with a map, will be found in the report of the Lake Erie and Ohio River Canal Board of Pennsylvania, composed of prominent business men and financiers of Pennsylvania, Ohio, and West Virginia, presented to Gov. Martin G. Brumbaugh of Pennsylvania, in June, 1917, copies of which are herewith submitted.

The canal will extend from the Ohio River at the mouth of the Beaver, about 28 miles from Pittsburgh, thence by way of the Beaver and Mahoning Rivers, the valley of Mosquito Creek, the summit level about 27 miles long, and the valleys of Grand River and Indian Creek, to the mouth of the latter stream on Lake Erie about 6 miles west of Ashtabula. The total length of the canal will be 101.5 miles. For one-half of this distance the courses of the Beaver and Mahoning Rivers will be followed, with only a few slight departures to straighten out difficult curves. There will not be more than 26 locks, with lifts not exceeding 30 feet. The total elevation to be overcome is but 327 feet, or only 1 foot more than that on the Welland canal, whose locks have a lift of 42.5 feet. The canal will have a minimum bottom width of 140 feet, a depth of 12 feet, and locks 56 by 400 feet.

On this map we show you the New York Barge Canal [indicating]. It gives you a general idea of the continuity of water transportation throughout the eastern part of the United States.

The CHAIRMAN. Suppose you trace the entire length of the proposed canal on the map.

Mr. STEVENSON. Of course, you know here is Pittsburgh, located at this point [indicating]. We propose to use the Beaver and Mahoning Rivers, up to the canalized Ohio, the valley of Mosquito, the summit level about 27 miles long, and the valleys of Grand River and Indian Creek to the mouth of Indian Creek on Lake Erie, about 6 miles west of Ashtabula. It is about 50 miles from this point to this point [indicating], and the total length of the canal will be 101.5 miles. We have another map which will show you more clearly in detail. This map was designed to show the connection of the waterway with the other waterways, not only west but also by way of the New York canal and down the Hudson River and the Delaware and Raritan Canals, and also down Chesapeake Bay, clear down to the Dismal Swamp canals, and the inland waterways and canals of the United States.

The proposed canal will be emphatically a national waterway, and more than that, it will also be an international one, for it will connect the whole Mississippi Valley with the Great Lakes region of the United States and Canada. It will form the last link in a chain of deep waterways reaching to 32 States and Canada, embracing the Mississippi, Missouri, and Ohio Rivers and their tributaries, the Great Lakes and the Canadian canals and rivers connecting with them, the New York Barge Canal, the Hudson River, New York Harbor, Long Island Sound, the Cape Cod Canal, the Delaware and Raritan Canal, the Schuylkill and Lehigh Canals, the Delaware River, the Delaware and Chesapeake Bays and their connecting canal, the Dismal Swamp or Drummond Lake, and the other intracoastal canals on the Atlantic and Gulf coasts. It will assist in affording a safe interior waterway for the passage of vessels of considerable size, free from the dangers of enemy attack or ocean storms, from New York Harbor and its connecting waterways to the Great Lakes, and thence to the Ohio and Mississippi Rivers, the Gulf of Mexico, and the Caribbean Sea to the Panama Canal: Through it small warships and munitions of war can be safely and expeditiously moved from the Mississippi and Ohio River Valleys to the Great Lakes and New York Harbor.

This proposed canal will furnish a great, regular, and cheap means of transporting the products of the coal mines and coke ovens and the iron and steel manufactures of western Pennsylvania, southern Ohio, West Virginia, Kentucky, and Tennessee to the Northwest, New York, and New England and for the iron ore of Minnesota to the Ohio Valley furnaces. It will furnish similar transportation for the food products of the Northwest to the Ohio and Mississippi Valleys as well as for such products of these valleys to the Great Lakes region, New York, and New England. A great traffic could also be moved by rail between Philadelphia, Baltimore, and Pittsburgh, and thence by water to and from the great Central West, Northwest, and Southwest.

Here is a point I wish to emphasize—that is, that this canal would have prevented a coal famine. Had this canal been in existence and the Ohio River been fully improved to below Louisville there would have been no coal famine in the Northwest or in the Ohio and Mississippi Valleys, or in New York and New England during the past winter; nor would 418 ocean-going ships carrying much-needed military supplies have been delayed in sailing to England, France, and Italy for lack of fuel, while many others would not have been held back for lack of cargoes. Also there would have been no lack of iron ore and coke at the Ohio Valley furnaces.

In the year 1916 the vessels on the Great Lakes transported from the iron-ore mines to the lower lake ports 15,000,000 more tons of ore than the record of 49,000,000 tons made in 1913. They should have taken back 3,000,000 tons more of coal than the record amount of 1913. Instead they carried back 3,000,000 tons less than that record amount. Thus was created the shortage of 6,000,000 tons of coal in the Northwest, to make up which 50 per cent of the freight cars on some 47 railroads were used for a considerable time. Subsequently also they were used to make up a shortage of iron ore at the furnaces. The employment of these cars in this way upset the entire transportation business of the country. It caused a shortage of many raw and manufactured materials and of food, with a consequent great rise in prices. The scarcity of coal caused much suffering and largely enhanced prices. Its scarcity and that of iron ore greatly hindered and delayed manufacturing, especially of war materials.

Now, there was plenty of coal at the mines, but the railroads were unable to transport it to the lake ports and the Northwest. Also there were 9,000,000 tons of iron ore at the lower lake ports at the close of the lake season, but the railroads could not bring it to the idle furnaces.

In January 24 of the 57 furnaces of the Carnegie Steel Co. were idle for lack of coal, iron ore, or coke. At the same time there was an abundance of coke as well as of iron ore and coal awaiting transportation.

The Lake Erie & Ohio River Canal with single locks would be capable of transporting 38,000,000 tons per annum, and with double locks 76,000,000 tons, at from one-half to one-third the cost on the railroads and much more regularly and expeditiously. With it in operation during the last two years all the coal required in the Northwest and New England would have been transported in time, as would also all the iron ore needed by the furnaces. The railroads would have been free to transport other needed manufactured materials and food to all sections of the country. There would have been no such shortages of food, fuel, and other articles as those from which the country suffered so severely during the past two years, and prices would have been very much less.

It is estimated that the country, through lack of adequate transportation facilities, has during the past two years lost by increased prices and decreased output from \$10,000,000,000 to \$20,000,000,000. In Cleveland alone it was reported that 100,000 working people were out of employment for lack of coal. Their first relief came from three vessel loads of coal brought from other lake ports, an incident

which serves to show most clearly how useful this canal would be to that community and many others like it on the Great Lakes. Cincinnati's coal famine was only relieved by opening dams on the Ohio River and also on the Great Kanawha River and thus floating down many thousands of tons of coal in barges over the unimproved portions of the Ohio River. The taking of the water, however, from the Great Kanawha dams resulted in the shutting down for a time of the coal mines on that river, thus accentuating the need of the completion of the improvement of the Ohio. I think we all agree that the coal situation next winter will be much more acute than it was last winter, and these experiences that we had last winter will be repeated probably during the time of this war.

It is not only the people of the country, but also the Government, that have suffered from lack of the transportation facilities which this canal would afford. The great armor-plate and munition factories at Pittsburgh and in the Ohio Valley generally could have had a much larger output had they been regularly and properly supplied with coal, iron ore, and coke. Their output could also have been much more expeditiously sent to the coast by this canal. Last November the Government was able to send several of its new submarine chasers safely from Lake Ontario to New York harbor through the partially completed New York barge canal, through which also passed large quantities of wheat. This New York barge canal stops at Buffalo, and, following by way of the Hudson River to New York, there would be, of course, a continuity of the route through our canal and this Pittsburgh district. With both these canals in full operation the Government war work would be vastly speeded up at the factories and be expedited in its transmission to the front.

It was the canalized Monongahela River which enabled the Pittsburgh war and peace industries to keep busy during the last two years, for in that period there were 25,000,000 tons of coal carried on this river.

Mr. SWITZER. That was last year?

Mr. STEVENSON. During the last two years. You will note the difference. I mention in regard to the cost of transportation. This was 9 cents as against 40 cents on the railroads, and they were too busy and congested with traffic to carry a single ton of this fuel. There were 25,000,000 tons of coal carried, as I said, from the mines on that stream to the furnaces and factories bordering on it at a cost of 9 cents a ton against 40 cents on the railroads, which were too congested with other traffic to have carried a single ton of this fuel. The Government has spent less than \$6,000,000 in all upon the Monongahela Canal, but in the last two years there has been saved in tolls alone on that stream \$7,600,000. But above and beyond all that the coal transported on this canalized river has enabled the output of many hundreds of millions of dollars' worth of manufactured material, including that most vitally needed by the Government for war purposes.

It was stated last year by Col. Edgar Jadwin, then district United States Engineer officer at Pittsburgh, but now in France, that within a few years the Monongahela River would be carrying 25,000,000 tons of freight annually, or double the amount carried in 1917,

because great new industries are now rising on its banks and other existing ones are making arrangements to use its waters. Large coal operators, taught by the recent railroad congestion that they can not any longer rely exclusively on the railroads for transportation, are now making arrangements so that they can ship coal and coke by the Monongahela and Youghiogheny Rivers.

In this connection I desire to make some quotations from an address recently made by Lieut. Col. H. W. Stickle, United States Engineer officer at Pittsburgh, before the Engineers' Society of Western Pennsylvania, on the subject, "Monongahela River Navigation," as follows:

Pittsburgh's great industrial development and her prestige as a steel center are due largely to the improvement of the Monongahela by canalization. Forty-five per cent of the coal mined in the Monongahela Valley is transported to Pittsburgh mills by water, and these mills, engaged principally in the manufacture of war material, depend on that 45 per cent for their continued operation.

Since the canalization of the river the lowland has been gradually filled with waste material from the furnaces and is now used for building sites for the extension of plants or new works. Manufacturing towns having no previous existence have been built along its shores, and concerns of national reputation, such as the Carnegie Steel Co., Jones & Laughlin Steel Co., American Steel & Wire Co., and others producing immense quantities of raw and semifinished materials, are preparing to ship by river.

I am still quoting Col. Stickle:

To give an idea of the prospective commerce I would state that the by-product plant of the Carnegie Steel Co., located at Clairton, when completed will require over 22,000,000 tons of fuel per year, and this coal will be moved from mines in the various pools with the company's own boats, which are now under construction. In addition to the shipment of coal by river to the plant at Clairton, approximately a million tons a year of beehive coke will be handled by the Carnegie Steel Co. boats from their coke plants in the sixth pool to Monongahela Valley plants and blast-furnace plants on the Ohio River. They further contemplate to handle such classes of raw materials as pig iron, etc., between the various plants, amounting to 3,000,000 tons per year.

These quotations show very clearly what a fully canalized river will do. The Monongahela runs into the Ohio, and the same story of increased shipments is now being shown on the upper portion of the latter stream, which is fully improved. The La Belle Iron & Steel Co., at Steubenville, has been for some time getting all its coal by river from the Monongahela Valley and has invested in coal tracts in the valley.

The CHAIRMAN. How far are they below Pittsburgh?

Mr. STEVENSON. About 70 miles. Now, the Lake Erie & Ohio River Canal will simply afford an extension of continuous improved navigation from the Monongahela and Ohio Rivers to the Great Lakes.

Mr. SWITZER. Do the Steubenville furnace people use lake ore?

Mr. STEVENSON. Yes; all of those firms use the lake ore; Steubenville and Wheeling and others use the lake ore.

It will not only be a great vehicle for the transport of coal from these rivers to the Lakes but for many millions of tons of iron ore from the Lakes to the river furnaces. The banks of the canal will speedily be lined with great industrial establishments like those on the Monongahela and upper Ohio Rivers, and as a consequence the tonnage on these streams will be vastly increased. Throughout the

route which we have surveyed for this canal there are some splendid available sites for manufacturing concerns that would no doubt take advantage of the shipping transportation which the canal would afford.

From these facts and the great and constantly increasing tonnage on the Sault Ste. Marie Canal and the Great Lakes there is every reason to believe that the traffic on the Lake Erie & Ohio River Canal would attain large proportions in a short time after its opening under Government auspices.

The saving on 38,000,000 tons of coal, iron ore, coke, lumber, food, glass, and other material carried on this canal with single locks in one year would exceed \$20,000,000 in tolls alone, but indirectly it would save many hundreds of millions annually to the people and the Government. It would, if equipped with double locks, carry 76,000,000 tons and save fully \$50,000,000 in tolls alone in a year. This canal would not alone be useful in war time. After the war the great question in this country will be cheap transportation if it is to compete with other countries for foreign as well as for much of our own domestic trade. For this canal would be the most effective factor in providing the cheapest possible transportation from the interior to the sea coast and vice versa.

The cost of this canal in normal times has been most carefully estimated by competent engineers at \$65,000,000; that is, in normal times; it would of course cost more now. If it were in operation to-day the Government and people would undoubtedly consider it worth many times its cost. Now, the Government proposes to spend from \$900,000,000 to \$2,000,000,000 to help put the railroads in better condition to meet the transportation needs of the country. This should be done. But it will take from three to five years to spend this money and get the new material and equipment required. Why not let the Government at the same time expend one-tenth of the smallest of these great sums, or, say, only \$90,000,000, just about double what the Government has authorized to improve a single New England railroad, in building this canal and improving the Ohio River?

The sum of \$90,000,000, it may be remarked, is the amount the Government advanced to the railroads during the first four months it operated them.

Mr. SWITZER. I agree with you that if this canal had been constructed, especially if the Ohio River had been further canalized before the commencement of the war, it would be of inestimable value to the Government and the people of this country at this time; but I have been a little on the anxious seat lately about the question of labor especially, because when our river and harbor bill got over into the Senate the question was raised whether the contractors on the Ohio would be able to procure labor to continue the construction of the locks and dams out there. I would like to have your opinion as to whether you believe that labor could be secured at even the prices that prevail now, and whether or not it would in your judgment interfere with industries which are directly concerned in manufacturing the things and supplying the products used in the prosecution of the war. I want to get your opinion on that.

Mr. STEVENSON. I will take that up more in detail later; it comes up in the logical course of the presentation of the question.

Mr. SWITZER. One of the great arguments we will be confronted with will be this: Supposing this bill was reported out, one of the first things that would be put up to us would be whether or not we would not interfere with industries, would not take labor from industries, used directly in the prosecution of the war.

Mr. STEVENSON. I think we have a large force of labor supply in the pro-Germans and anti-Americans in this country that should be interned and put on some Government work.

Mr. SWITZER. I think that could be done, myself.

Mr. STEVENSON. I will speak of that later on. I saw quite a large number of them working on the Welland Canal two years ago, and we ought to have some very big internal transportation movements so that we can utilize these interned Germans, rather than taking such good care of them in the internment camps. I will speak of that a little later on, when I will be very glad to take it up.

Within the last few days the Government has placed an order for 70,000 freight cars, which it is estimated will cost from \$170,000,000 to \$210,000,000, the latter figure being nearly three times the probable cost of the Lake Erie & Ohio River Canal. The total capacity of these cars would be equal to the annual capacity of the Lake Erie & Ohio River Canal with single locks. I understand that within a very short period the Government's total order for freight cars will amount to \$325,000,000. This is as it should be, but I submit that when expending these enormous sums it should not overlook the fact that the relief aimed at could be doubled by this canal for a fraction of that cost.

This work could be done in three years or less, we are informed by competent United States Engineers, if the Government will undertake and press it as a war measure. The result would at least be a doubling of the relief afforded by the expenditure on the railroads of from ten to twenty times the amount asked for these waterways and in practically the same or even less time.

The great use of the canals and rivers of Europe by the various belligerents in the present war affords a striking object lesson of the need of the Lake Erie & Ohio River Canal and the improved Ohio River. Those waterways have been employed to carry large numbers of troops and vast quantities of munitions of war and food supplies, as well as war and hospital ships. They have also served as strong lines of defense. Gen. Pershing's perception of the value of the French canals and rivers for war purposes has been strikingly shown by his request for the formation of a regiment of Ohio and Mississippi rivermen to help operate boats and barges on such canals and rivers, a request which the War Department approved, and such a regiment is now being organized. The Kiel Canal virtually doubled the strength of the German fleet, and the Panama Canal has rendered similar service for our Navy. The Lake Erie & Ohio River Canal would enable the use of many small warships alternately and quickly, either on the Atlantic coast, the Great Lakes, the lower Mississippi, or the Gulf of Mexico.

Only last week 34 vessels, aggregating 100,000 tons, were enabled to pass from the Great Lakes to the Atlantic by way of the Canadian canals and the St. Lawrence River; 23 more, with a tonnage of 50,000, will take the same route this month. That is just mentioned

to show how serviceable in this emergency the water transportation of the Northwest is.

France, in the midst of her terrible trials, has opened a new waterway from the Rhone to Marseilles. Germany last year voted \$150,000,000 for new canals. It is already reported that she proposes to carry out the long talked of Russian scheme of uniting the Baltic and Black Seas by a great canal. The State of New York has spent \$150,000,000 on her barge canal, which will be fully completed in May, 1918. The proposed Lake Erie & Ohio River Canal will cost very much less than this amount and will have more tonnage to draw upon than the combined traffic of the Panama, Suez, Kiel, Manchester, and New York Barge Canals, which cost altogether more than \$1,200,000,000.

As improved waterways always increase business on railroads, the Government when expending great sums on the latter should safeguard itself by at the same time bettering the former at a small cost.

If the Government will undertake the work on this canal it can be proceeded with at once. Some of the most eminent engineers of the United States Army have already passed upon its feasibility, necessity, and advantages, as well as some of the most expert civic waterway engineers of the Nation. The National Waterways Commission some years ago approved of the project. Therefore there need not be the usual delays of peaceful times in beginning the work.

This canal, as has been shown, being an immediate national necessity, should be undertaken at once by the National Government. Just as the Government has, by reason of the exigencies of war and the necessity for quick action taken over the railroads and the ocean and Great Lakes waterways, so now similar conditions require that instead of the counties and States of the canal district trying to construct this canal, something they would not be able to do until the war was over, the Government should undertake the task at once and finish it in three years or less.

The time fixed for the construction of the canal before the war was five years. This took into consideration legal delays of about two years. But, as you know, we are doing things radically different and much quicker now. If the Government undertook the work there would be no legal delays because of disputes over rights of way, etc. In France our engineers have built a port in 10 months which would originally have taken $3\frac{1}{2}$ to 5 years. At the same time they built a 350-mile railroad with four tracks, equal to a single-track road from New York to Omaha, which in peace times would have taken 5 to 10 years. A 5,500-ton vessel was launched at Camden this week in 27 days and will be completed in 15 additional days. The Government could commandeer both material and labor for the canal. In Canada I saw 800 German internes working two years ago on the Welland Canal, taking the places of an equal number of Canadians who had gone to the front.

The Government should take full control, not only of this proposed canal, but of all other existing canals and navigable rivers, at least to the extent of seeing that the traffic on all waterways is closely coordinated with that on the railroads. The lack of such coordination during and prior to the last two years resulted in large amounts of coal and other material remaining in cars undelivered for long

periods, or on wharves and in warehouses unmoved, thus contributing to the general distress and inconvenience of the people.

I am informed that for years the railroads, when mine owners who grew impatient with failure to get cars ordered river barges, immediately sent cars which the operators foolishly loaded instead of the barges, only to have these cars stand for days and weeks on sidings undelivered. On the other hand, I am told of a steamboat company having two boats, but which is only employing one and refusing much freight for fear that it would have to reduce its too high rates. At the same time there is said to be business enough to employ three boats.

The nation-wide need of the Lake Erie & Ohio River Canal has been shown, but it will also have a special value to particular sections.

The people of the Mississippi and Ohio Valleys will find in the canal a great boon, for it will assure to them cheap and reliable connections with the Great Lakes region, New York, New England, and the Atlantic coast generally by a safe interior waterway. They can send their coal and manufactured and food products by this canal from New Orleans, St. Louis, Kansas City, Minneapolis, Evansville, Louisville, Cincinnati, Wheeling, and Pittsburgh, and receive back over it the iron ore, food, and goods they want from Duluth, Detroit, Milwaukee, Chicago, Cleveland, New York, Boston, Philadelphia, and Baltimore, as well as from Montreal and Quebec.

The great Government armor plate and other plants at Charleston, W. Va., will be particularly benefited by this canal, as through it they can get their iron ore cheaply and send their products to the Atlantic coast in safety. Ex-Gov. William A. MacCorkle, of Charleston, in an address before the Chamber of Commerce of Pittsburgh, on October 31, 1916, showed this clearly when, in speaking of this canal, he said:

How vital it is to this country at large can be seen at a glance. The Ohio River will be canalized within a few years, and an equal and uniform depth will obtain from the mouth of the river to Pittsburgh. Within a few years vast progress will be made as to transshipment of cargoes, and this river and the Lakes will be directly connected with the Gulf of Mexico. The South, the Southwest, the great middle territory, the Northwest, control this country and its votes can settle any question that it may desire.

We can not understand how anyone living within this region can do otherwise than vote for the placing of this burden upon the whole people rather than on this section. It is not a burden which should be carried alone by you, but by reason of its wonderful importance to the whole country it should be carried by the people of the United States. We believe that it will be cheerfully borne and that Congress will readily vote the money necessary for the joining together of the Great Lakes and the Ohio River, thus utilizing to a greater extent than ever the vast sums which have been spent upon the Ohio and Mississippi by the National Government.

The great reservoirs of the canal would prove of value in aiding in protecting the Ohio and Mississippi Valleys from floods, and also in supplying water to the Ohio River dams in time of drought. The Government could also derive a considerable revenue from the water power which could be developed from these reservoirs, the canal feeders, and the canal dams and locks.

The Great Lakes region will be particularly benefited by this canal. Its people will get a sure and cheap supply of coal and the food and other materials they need from the Ohio and Mississippi Valleys at

much less cost than at present, and will be able to send their iron ore, food, and other products regularly and cheaply to these valleys. The cities on the Great Lakes need the canal even more than Pittsburgh, for they will require it to get to the Panama Canal and the Ohio and Mississippi Valleys by a safe interior waterway, while Pittsburgh does not need the canal for this purpose.

You can see the route they would take to the Gulf [indicating]. It is a historic fact that in early colonial times, just about the time they had the whiskey insurrection in western Pennsylvania, in taking the grain to New York it was taken down the Ohio and Mississippi Rivers and up to New York by way of boats built on the Monongahela River. It took so long, however, that it was very good whiskey when it arrived. But it is not a new route for taking material inland.

The New York and New England section will also largely benefit from this canal. With it and the New York Barge Canal in operation its people will be forever freed from the danger of the repetition of the coal famine of the last winter, and will be assured of a cheaper and more regular supply of this necessary material. Gen. W. W. Wotherspoon, superintendent of public works of New York, estimates that the barge canal, operated in close cooperation with the railroads, would save the people of New York \$11,000,000 a year. But with the Lake Erie & Ohio River Canal in operation it is certain this saving would be doubled. Bituminous coal could be taken by these two canals and Lake Erie direct from the mines to all sections of New York near the barge canal and the Hudson River, and also to New England by Long Island Sound and the Cape Cod Canal. The products of New York and New England could similarly be sent more cheaply and regularly to the Ohio and Mississippi Valleys by the proposed Lake Erie & Ohio River Canal.

When the intracoastal system of canals is completed the coal and other products of the Ohio and Mississippi Valleys can be carried through the Lake Erie & Ohio River Canal and across New Jersey to Philadelphia, and thence to Baltimore, Washington, Norfolk, and farther south, and these communities can in turn send their output to the interior of the country.

It is feared in some quarters that the employment of men and use of material to build this canal would interfere with the Government's war work; but enough has been said to show that its construction would expedite that work. Certainly it would appear obvious that the expenditure of the comparatively small sum required for material and labor to provide adequate transportation by water, which would insure the regular and full output of and transportation of war material, would not interfere with the Government use of our industries nearly as much as the expenditure of from 10 to 20 times that amount on labor and material to achieve the same result in the same time by the improvement of our railroads. As was said before, why not employ these same agencies together and double the results in the same period at but a small additional expense?

Again, it is not evident to some few persons why the building of the canal would be a war measure; but this point has been already fully elucidated. Any project that will largely increase our transportation facilities and thus insure the full and regular output and

prompt transfer to the battle front of war material must certainly be regarded as a most important war measure.

Viewing the estimated loss of \$10,000,000,000 to \$20,000,000,000 occasioned during the last two years because of inadequate transportation, the great suffering accruing therefrom, and the delay in the output and transportation of war material, the small cost of this canal, compared with the great results which would follow from its construction, both in times of war and peace, ought to be sufficient to justify the immediate appropriation of the necessary money by Congress.

The need of this canal in time of peace has been mentioned because past experience has clearly shown every succeeding period of prosperity brings a great congestion of the railroads, for which the waterways, which in their very inadequately improved state, carried in 1916, 376,000,000 tons of freight, equal to the capacity of 9,400,000 40-ton railroad cars, or four times as many as the railroads now own, alone offer any substantial relief. In this connection it is pertinent to quote from an article entitled, "Nation's canals may end freight jam," by S. C. Mead, secretary of the Merchants Association of New York, published in the New York Sun of Sunday, March 17, 1918, which says:

The breakdown of the railroad service began to be felt before the United States entered the war. It is not a result of our participation in the struggle. The truth is that east of the Mississippi River the railroads can not meet commercial needs for transportation. How short-sighted it is to depend upon this single means of transportation has recently been demonstrated twice; first, when the railroad brotherhoods threatened to tie up the roads in 1916, and again when the necessity for moving war freight paralyzed them.

I quote James J. Hill, who seemed to have a vision of waterways that very few railroad men had. Before he died he expressed himself in this way: He declared at that time it would require the expenditure within the then ensuing five years of \$5,500,000,000 on the railroads of the country to enable them to transport its business properly, while the expenditure of but one-eleventh of that sum, or \$500,000,000 judiciously upon the waterways would give greater relief to the railroads and the people.

While it is desirable and necessary to build many ships, yet it is well to remember that if they are to be fully and promptly loaded with war material in time of hostilities and with the ordinary articles of commerce in times of peace it will be requisite that our furnaces and factories be kept busy in producing such material and articles, and that their output and that of our farms be regularly and speedily transported to the ocean front. Otherwise many of our ocean ships will be idle and the sailing of others be greatly delayed. To aid in preventing such results we must have deep waterway connection between the mines and the furnaces and factories, and from the latter and the farms to the seacoast.

After the war our people will have to live as economically as they can for a long period in order to bear the great burden imposed by the conflict and to recoup their losses, and the cheapest possible transportation of the necessities of life, including food, clothing, and building material, will be a most important aid to that end, and such transportation can only be assured by the greatest possible use of our internal waterways. Even now there is great fear of another

coal, coke, and iron-ore famine next winter, while tobacco, wool, lumber, food, and other necessities can not be promptly moved for lack of transportation.

On April 28 the National Coal Association issued a strong statement, in which, among other things, it was said:

Opinions of operators in the great producing area east of the Mississippi, which furnishes more than 90 per cent of the country's bituminous coal, requested by the National Coal Association, are almost unanimously to the effect that the coal shortage next winter will be worse than that of last winter unless the mines are furnished sufficient cars to enable them to increase materially their present rate of production.

Operators in Pennsylvania fields inform the National Coal Association that it is the consensus of opinion that the coal shortage this next winter will be worse than last. Car shortage is at present the main factor limiting the production. Lack of steady work, due to the car shortage, has driven labor away from the mines, and the present prospect is that both labor shortage and car shortage will be serious factors this fall.

Our canal would afford regular transportation for from 20,000,000 to 40,000,000 more tons of coal per year. It would reduce greatly both the car shortage and the labor shortage, both of which I believe will steadily grow worse. There is abundant evidence on every hand that the railroads, notwithstanding the Government aid and administration, are facing their greatest problems in the next three to five years.

Let is not therefore be penny-wise and pound-foolish. Let is not longer procrastinate. By spending \$80,000,000 or \$90,000,000 now on this canal and the Ohio River we can give as much relief in the same time as by spending 10 to 20 times that amount on the railroads. By doing so we will save billions of dollars and thousands of precious lives and will greatly expedite the transportation of our soldiers and their supplies to the front.

But it may be asked, Suppose while the canal construction is under way, peace is declared, what then? Then, as I have intimated, the canal will be needed for the commercial war that will follow peace. But further than that it will serve as a great factor in aiding in the readjustment of labor conditions which will follow peace, when millions of soldiers will return home to find their places taken by older and younger men and women.

You will remember this problem presented itself in a considerably less degree after the Civil War. Then it was met by the fact that a multitude of men found employment in building the great Pacific railroads, which were only possible by the Government's action in making great land gifts to their projectors. Other multitudes of returning soldiers found work and homes in developing our then infant steel industries and in taking up millions of acres, then but not now available, for homesteads in the West.

Many soldiers of the present war would find work in completing this canal and in building and operating the boats to ply on it and in the many great new industries which are sure to spring up on its banks. So if the war ends before the canal is opened it will still speedily repay many times its cost in the days of peace, which I pray earnestly may not be far distant. But we do not know when peace will come, and because we do not is no more reason for not undertaking this canal as a war measure than that we should curtail

our expenditures for arms and ammunition and ships for fear that peace may come before much of these can be used.

Considering, therefore, the supreme and vital importance of adequate transportation as a factor in winning this war—a factor that is needed to insure the steady and fullest operation of great war material industries and the regular and speedy transfer of their output to the battle front—and considering also the need of this factor in our after-the-war trade and commerce and in reducing the cost of living of our own people, and also in saving them from great suffering because of coal and other shortage, it is felt that at this time no similar sum could be expended to such great advantage by the Government as the laying out of the amount required to construct the Lake Erie & Ohio River Canal, which may furnish the last link needed to provide the transportation which will win the war.

The principal points made in the foregoing argument were briefly given in a letter to President Woodrow Wilson from the Lake Erie & Ohio River Canal Association, dated December 11, 1917, which was by him promptly referred to the Council of National Defense, which in turn forwarded it to the council's committee on inland water transportation. On December 15 the secretary of that committee wrote to the secretary of the Lake Erie & Ohio River Canal Association as follows:

In connection with your proposals I desire to say that the claims of the Lake Erie & Ohio River Canal Association are well known to this committee as well as to the office of the Chief of Engineers, United States Army, and that there is no possibility of taking up the matter of the construction of this canal until Congress has affirmatively adopted the project. Your efforts should, therefore, be directed to secure from Congress such legislation as may be deemed advisable in order that the construction of your canal may be begun and pressed vigorously to a conclusion.

Following the receipt of the above and after consultation with United States Engineer officers and other public officials and most careful consideration, the bill was prepared providing for the construction by the Government of the Lake Erie & Ohio River Canal as a war measure, which was introduced into the National House of Representatives by Hon. Guy E. Campbell, of Allegheny County, Pa.

The CHAIRMAN. Mr. Stevenson, Congress passed an act approved June 30, 1906, incorporating the Lake Erie & Ohio River Ship Canal Co., based upon the general idea that the proposed corporation would organize and that it would construct this canal through subscriptions to its stock, the issuing of bonds, and it provided for a minimum depth of 12 feet; and there was a further proviso that at the end of 50 years the Government might take it over at an agreed price. Was that company ever organized?

Mr. STEVENSON. The preliminary organization was just at the great depression of that time. At that time it was almost impossible to secure the capital to go on with that company, and the plan was given up. Then the plan that followed that was to have the States, the counties bordering the canal, and those that were affected and benefited, to complete the canal. That plan has been before the people of Pennsylvania, West Virginia, and Ohio for several years. A complete survey has been made; the State of Pennsylvania has spent \$200,000 in making a complete survey and in assuring the investigators that this problem was feasible.

The CHAIRMAN. Have you a copy of that report that you could leave with the committee for its files?

Mr. STEVENSON. Yes, sir; we have that report for you here, which we will leave with your committee. This is the final report of the committee, and this report was made to Gov. Brumbaugh, covering the feasibility and cost of construction. We also mention the Army officers that have indorsed this project, Gen. Abbott, a member of the Panama Commission, and L. M. Haupt, a member of the Nicaraguan Commission, and Col. Newcomer. They are all mentioned in this report, and we will be very glad to leave it with you.

The CHAIRMAN. What were the controlling difficulties which prevented the carrying out of the plan to construct this canal through private capital?

Mr. STEVENSON. You mean that original proposition?

The CHAIRMAN. Yes.

Mr. STEVENSON. It was the scarcity of money at that time, the depression of 1907.

The CHAIRMAN. Was it proposed that the States of Pennsylvania and Ohio, or subdivisions of those States, should issue bonds and subscribe to the cost of the canal?

Mr. STEVENSON. Not in that plan. no; that was not considered in that plan.

The CHAIRMAN. Has that been discussed and is it deemed practicable?

Mr. STEVENSON. The idea was in considering the canal from the standpoint of benefiting the counties contiguous to it, the Legislatures of Pennsylvania, Ohio, and West Virginia authorized these counties to issue bonds to provide the funds for completing the canal. But no steps have been taken, because the report has only been completed, and no steps have been taken along that line yet.

The CHAIRMAN. I have read from some source that there were some provisions in the constitution of Pennsylvania, and perhaps of Ohio, which would prevent those counties or subdivisions from voting the public credit for the construction of this canal. Are you informed as to that?

Mr. STEVENSON. It is true, but we have special legislation authorizing the counties to issue bonds.

The CHAIRMAN. But if the obstacle exists in the constitution of Pennsylvania, that would prevent the legislature from giving that authority.

Mr. STEVENSON. That has been very carefully looked over by our attorneys, and they have decided that we are constitutionally on safe ground if the indebtedness is assumed by all the counties that are benefited.

The CHAIRMAN. I am simply asking for information.

Mr. STEVENSON. That question has been looked into very carefully by our attorneys, and we believe we have had corrective legislation in Ohio and West Virginia to cover the same point.

The CHAIRMAN. As I recall this bill pending before the committee introduced by Mr. Campbell, it does not provide for local cooperation upon the part of the States of Pennsylvania and Ohio to any extent. Has consideration been given to the question of cooperation, and has any conclusion been reached?

our expenditures for arms and ammunition and ships for fear that peace may come before much of these can be used.

Considering, therefore, the supreme and vital importance of adequate transportation as a factor in winning this war—a factor that is needed to insure the steady and fullest operation of great war material industries and the regular and speedy transfer of their output to the battle front—and considering also the need of this factor in our after-the-war trade and commerce and in reducing the cost of living of our own people, and also in saving them from great suffering because of coal and other shortage, it is felt that at this time no similar sum could be expended to such great advantage by the Government as the laying out of the amount required to construct the Lake Erie & Ohio River Canal, which may furnish the last link needed to provide the transportation which will win the war.

The principal points made in the foregoing argument were briefly given in a letter to President Woodrow Wilson from the Lake Erie & Ohio River Canal Association, dated December 11, 1917, which was by him promptly referred to the Council of National Defense, which in turn forwarded it to the council's committee on inland water transportation. On December 15 the secretary of that committee wrote to the secretary of the Lake Erie & Ohio River Canal Association as follows:

In connection with your proposals I desire to say that the claims of the Lake Erie & Ohio River Canal Association are well known to this committee as well as to the office of the Chief of Engineers, United States Army, and that there is no possibility of taking up the matter of the construction of this canal until Congress has affirmatively adopted the project. Your efforts should, therefore, be directed to secure from Congress such legislation as may be deemed advisable in order that the construction of your canal may be begun and pressed vigorously to a conclusion.

Following the receipt of the above and after consultation with United States Engineer officers and other public officials and most careful consideration, the bill was prepared providing for the construction by the Government of the Lake Erie & Ohio River Canal as a war measure, which was introduced into the National House of Representatives by Hon. Guy E. Campbell, of Allegheny County, Pa.

The CHAIRMAN. Mr. Stevenson, Congress passed an act approved June 30, 1906, incorporating the Lake Erie & Ohio River Ship Canal Co., based upon the general idea that the proposed corporation would organize and that it would construct this canal through subscriptions to its stock, the issuing of bonds, and it provided for a minimum depth of 12 feet; and there was a further proviso that at the end of 50 years the Government might take it over at an agreed price. Was that company ever organized?

Mr. STEVENSON. The preliminary organization was just at the great depression of that time. At that time it was almost impossible to secure the capital to go on with that company, and the plan was given up. Then the plan that followed that was to have the States, the counties bordering the canal, and those that were affected and benefited, to complete the canal. That plan has been before the people of Pennsylvania, West Virginia, and Ohio for several years. A complete survey has been made; the State of Pennsylvania has spent \$200,000 in making a complete survey and in assuring the investigators that this problem was feasible.

The CHAIRMAN. Have you a copy of that report that you could leave with the committee for its files?

Mr. STEVENSON. Yes, sir; we have that report for you here, which we will leave with your committee. This is the final report of the committee, and this report was made to Gov. Brumbaugh, covering the feasibility and cost of construction. We also mention the Army officers that have indorsed this project, Gen. Abbott, a member of the Panama Commission, and L. M. Haupt, a member of the Nicaraguan Commission, and Col. Newcomer. They are all mentioned in this report, and we will be very glad to leave it with you.

The CHAIRMAN. What were the controlling difficulties which prevented the carrying out of the plan to construct this canal through private capital?

Mr. STEVENSON. You mean that original proposition?

The CHAIRMAN. Yes.

Mr. STEVENSON. It was the scarcity of money at that time, the depression of 1907.

The CHAIRMAN. Was it proposed that the States of Pennsylvania and Ohio, or subdivisions of those States, should issue bonds and subscribe to the cost of the canal?

Mr. STEVENSON. Not in that plan. no; that was not considered in that plan.

The CHAIRMAN. Has that been discussed and is it deemed practicable?

Mr. STEVENSON. The idea was in considering the canal from the standpoint of benefiting the counties contiguous to it, the Legislatures of Pennsylvania, Ohio, and West Virginia authorized these counties to issue bonds to provide the funds for completing the canal. But no steps have been taken, because the report has only been completed, and no steps have been taken along that line yet.

The CHAIRMAN. I have read from some source that there were some provisions in the constitution of Pennsylvania, and perhaps of Ohio, which would prevent those counties or subdivisions from voting the public credit for the construction of this canal. Are you informed as to that?

Mr. STEVENSON. It is true, but we have special legislation authorizing the counties to issue bonds.

The CHAIRMAN. But if the obstacle exists in the constitution of Pennsylvania, that would prevent the legislature from giving that authority.

Mr. STEVENSON. That has been very carefully looked over by our attorneys, and they have decided that we are constitutionally on safe ground if the indebtedness is assumed by all the counties that are benefited.

The CHAIRMAN. I am simply asking for information.

Mr. STEVENSON. That question has been looked into very carefully by our attorneys, and we believe we have had corrective legislation in Ohio and West Virginia to cover the same point.

The CHAIRMAN. As I recall this bill pending before the committee introduced by Mr. Campbell, it does not provide for local cooperation upon the part of the States of Pennsylvania and Ohio to any extent. Has consideration been given to the question of cooperation, and has any conclusion been reached?

Mr. STEVENSON. No; I do not think that question has been taken up in connection with this bill. Of course the conditions growing out of the war have stopped all thought of any large improvements of any kind; we can not under the circumstances expend any money for any large improvements. We are taking this up entirely as a war measure and as a national proposition, affecting not only Pennsylvania, Ohio, and West Virginia, but all the States of the Northwest, making a continuous waterway from New Orleans clear to New York City and covering the intercostal canals that are being built. We are looking at this purely as a war measure. We want, if possible, to relieve the coal situation and the suffering that is bound to occur next winter and every other winter for many winters to come if we do not provide transportation for fuel, and in the same way bring down from the Northwest the ore necessary for our munition plants to use. The suffering and loss entailed by the furnaces closing in the Shenango Valley last winter can not be computed.

The CHAIRMAN. I would like to direct your attention to another phase. It is proposed that this canal shall have a minimum depth of 12 feet.

Mr. STEVENSON. Yes, sir.

The CHAIRMAN. That corresponds with the canal system of New York?

Mr. STEVENSON. Yes, sir.

The CHAIRMAN. Have you, or have any of the gentlemen present, considered the question of the practicability of the operation of barges on a waterway having a depth of 12 feet, on the Lakes, with a view of shipping through materials, for instance, between Duluth and Pittsburgh?

Mr. STEVENSON. Yes; that question has been considered. The question of barges is in rather an experimental state, even now that the New York Barge Canal is in operation, and the Government has taken a great interest in the question; but I saw myself in the Tombigbee and the Black Warrior, which are canalized—in those two rivers to Mobile—I saw coal in self-propelled barges, and they came across the Gulf to New Orleans and were unloading coal there [indicating on map]. We do not think there is any doubt that we can interchange with the coal barge canal, and we believe that in time a barge will be constructed that will be used from the Lakes. That has not been done yet, and it is a question that is being studied by the constructors.

Mr. SWITZER. How long does it take to transfer the ore from the lake-carrying vessels into the railway cars now in use? Did you ever look into that? For instance, say they transfer from the Lake vessels into the car systems in use; how long does it take to deliver the ore into the cars, or the places where they store it?

Mr. STEVENSON. I could not answer that question; but they transfer it in a very short time.

Mr. SWITZER. My recollection is it is less than a day.

Mr. STEVENSON. It is something of that kind, and much of it is brought right up here at Ashtabula and at these points on the lake. We believe our canal boats will go right alongside of those lake freight steamers and iron-ore steamers and with the same machinery

would load into the canal boats without any inconvenience; right alongside of these large steamers.

The CHAIRMAN. One of the advantages of this waterway, of course, would be to save the cost of transfer at Ashtabula, if that should be the terminus of the canal on Lake Erie; and it was estimated some years ago that the cost of transfer was 15 cents per ton, so that it becomes an important factor to determine whether or not the barges on a waterway having a depth of 12 feet, a loaded barge having a draft of 12 feet, could navigate the lakes successfully, say, from Duluth to Pittsburgh, so as to avoid this cost and delay of transfer from the lake vessels to the barges and other vessels which would operate on this waterway between Ashtabula and Pittsburgh. I was asking whether any investigation had been made upon that point, because it is an important factor.

Mr. STEVENSON. That is an important factor, and we have included that in what we believe we can establish as a tariff for bringing ore to Pittsburgh, 50 cents a ton as compared with 96 cents. Even with the transfer we believe we can transport ore from the lakes into the Pittsburgh district at 50 cents a ton, and we see the evidence of that even with the transfer of coal. We find the large manufacturing concerns on the Ohio and the Monongahela Rivers bringing their coal out of the lower part of Pennsylvania and West Virginia and delivering at their mills, including transfer after they get to the mills, to where they want it, and the cost was about 9 cents a ton, as compared with the same haul of 40 cents by the railroads, and that includes the transfer at the yards. In other words, the water transportation is so ridiculously low that it will absorb almost any expense necessary for handling heavy freight.

The CHAIRMAN. You have been actively connected with this movement for the equipment of this waterway how long?

Mr. STEVENSON. I have been chairman of the Lake Erie and Ohio River Canal about three years.

The CHAIRMAN. During the course of the hearing I want to put one thought before you, and I think I might as well express it at this stage. You are asking for legislation by Congress which will authorize the construction of this waterway connecting the Ohio River with Lake Erie, and that the necessary cost shall be met by an appropriation made by Congress, and that it shall become a public waterway, owned and controlled by the Federal Government.

There has been in progress for a number of years a propaganda, sincere for all I know, to the effect that canals were neither useful nor practicable in transportation. You will find to-day a good many citizens, a number of newspapers and some Members of Congress in both bodies who take that position. You have pointed out facts which in your opinion connect this waterway very closely with the needs of transportation, and you say it will develop a large traffic. You say the amount of traffic and the saving on that traffic will amply justify the expenditure. You say, therefore, it is not a waterway local to Pennsylvania and Ohio but that it connects the other waterways, which makes it national in its scope and benefits. Congress at best only reflects the public opinion of the country, and its Members and Senators usually act in response to that sentiment. So as a practical legislative proposition it must not be forgotten that

neither this committee nor the membership of the House are autocrats; they are expected not only to respond to public demands but to understand that those demands are simply a reflection of public sentiment. I do not know to what extent the people of Ohio and Pennsylvania even are a unit on this matter. Judging by their representatives in the House and in the Senate, they are not. I simply advance that thought for your consideration and to suggest to you that when you go back home you suggest to these 20,000 business men and to the 150,000 workmen whom you say are represented by these organizations who have individual representatives here to-day, that this is not only a task before this committee and before Congress but before the people, to make up the body of public opinion.

Mr. STEVENSON. I think that public opinion is changing very rapidly; when they have no coal in the house and the children are suffering and the old people are dying with pneumonia, their sentiment changes very rapidly in regard to transportation of coal.

The CHAIRMAN. I agree that there is a trend in the whole land at the present time in favor of the rehabilitation of the waterways, the using of them.

Mr. STEVENSON. You can hardly take up a paper that has not some article on water transportation and calling upon the country to utilize those inland waterways.

Mr. FREAR. Is not that largely due to a regular propaganda urged at this time?

Mr. STEVENSON. I do not think so. It seems to me the improvements that are being made on the canals of the eastern coast show the importance of it, and I know that in France they are building right during this war a canal from Marseilles to Paris, and I have been on the Birmingham Canal—

The CHAIRMAN. The French are tunneling a mountain.

Mr. STEVENSON. A wonderful tunnel to reach around the falls of the Rhone; but there seems to be such a trend all over the world, as far as we can see the situation. I received a book last week from a nephew of mine who is in London. He sent me a book entitled "The Canals of England," and it gave the operations planned, and they are utilizing every one of them, even if they are only 4 feet deep. They simply were shot to pieces as far as transportation was concerned, and they had to use them.

The CHAIRMAN. While we are on this line of thought, the committee is endeavoring to encourage local activity on the part of localities, particularly cities and towns, to utilize waterways, either natural or artificial, which have been improved by the Government, and the committee, I think, realizes, and I think intelligent students of the subject also realize, that those improved channels will not be and can not be, as a practical proposition, utilized unless there are adequate modern terminals. There are gentlemen here representing the city of Pittsburgh. It has been reported that there is not an adequate water terminal in the city of Pittsburgh, and we are improving the Ohio River to a very great extent; and to those gentlemen who are from the city of Pittsburgh I would like to take advantage of this opportunity to say that the committee expects that Pittsburgh, as the head of navigation on the Ohio, receiving such great

benefits from the improvement of the Monongahela, will provide a terminal which shall be an example to other cities and towns on the Ohio River, which shall have such equipment and be of such a type as to meet the developing water transportation.

Mr. STEVENSON. Mr. Chairman, you know the reason why these terminals have disappeared.

The CHAIRMAN. I have never been in Pittsburgh.

Mr. STEVENSON. There has been a lot of water business done in Pittsburgh during the last hundred years, and we have had good wharfage, and they have all disappeared. There are two great reasons for that. I will read these two reasons from a paper I have here. It is an address on the decline of water transportation; and of course these new canals are modern canals, just as modern as the Twentieth Century Limited as compared to the old 4-foot canals with wooden canal locks. If you have seen the New York Barge Canal, you will know what a great construction it is. There are two fundamental reasons for the decline of river traffic: First, the railroads, in competition with river traffic, reduced the rates so that the steamboats and packet lines went out of business, and the terminals consequently went out of business. [Reading:]

First. The railroads, in competition with river traffic, reduced their rates so low that many of the steamboat and packet lines were compelled to go out of business. In the early days these reductions were temporary, and remained in force only long enough to put the packet lines out of business. The districts which did not enjoy river-transportation facilities made up the differential in freight rates, so that the railroads lost nothing.

Second. The withdrawal by the railroad companies of through-traffic arrangements with the waterways; that is to say, that if you wished to make shipment to inland cities in Ohio or Indiana from Pittsburgh you could ship by boat to a point and make close connection with the railroad, which would carry it to its destination at a through rate of freight and through bill of lading. When the railroads discontinued this through routing the inevitable result was the large decline in the river traffic. Most of these conditions have been corrected by law when the ruling was made by the Interstate Commerce Commission that where rates were lowered in competition with water transportation they could not be advanced. Before this ruling went into effect there was a hasty readjustment of all freight rates upward by the railroads where they came into competition with water transportation throughout the United States.

The CHAIRMAN. I am speaking individually as a friend of the improvement of waterways. I am a believer in the possibility of the improvement of water transportation. Now, as to the reduction of rates by railroads in competition with water lines in former years to such an extent as to make the operation of boats unprofitable, I interpret the law recently passed by Congress to give the Director General of Railroads the power to readjust these railroad rates. Some of us have been before the Director General and the Committee on Waterways advocating it, but so far as I am aware, there has been no concerted movement in the great industrial centers, like Pittsburgh, asking for that. As to through traffic between the railroads and the waterways, we all agree that it must come if we are to have any comprehensive, satisfactory system of water transportation; but you can not have interchange of traffic between the railroads and waterways unless you have a modern equipped terminal, so that the transfer between the water carriers and the rail carriers shall be made in the cheapest and in the most expeditious manner. That is a preliminary condition about which I for one will agree. So there is a

method and a way pointed out by which the representatives of the commercial cities, like the great city of Pittsburgh, may remove both of these impediments to water traffic by having the railroad rates readjusted whenever they are too low, so as to afford a differential in favor of the water carriers, to enable them to operate at a reasonable profit. You have the matter of interchange of traffic between the water carriers and the rail carriers in your hands, by first providing the modern and adequate water terminals and then by going before the Interstate Commerce Commission and asking that body for the establishment of a through rate between the railroads and the water carriers which will be fair to the water carriers and the railroads.

Mr. STEVENSON. But we must have the water routes first.

The CHAIRMAN. You have the Monongahela, and the Ohio will have a channel to Cincinnati all the year with the funds appropriated in the pending river and harbor bill. We have appropriated \$30,000,000 for the improvement of the Ohio River, and I hope the appropriations will continue.

Mr. STEVENSON. And it will come.

The CHAIRMAN. Some of us believe they ought not to continue unless they have an assurance that the channel that will be provided by this sixty-odd million dollars and more, which is going to be expended by the Federal Government to improve the Ohio between Pittsburgh and Cairo, will absolutely be used to the maximum for water transportation.

Mr. SWITZER. The idea may go out that there are no modern terminal facilities along the Ohio River and the Monongahela. I will ask the gentleman if it is not true that these great industries that utilize the Monongahela, that carry from twelve to fifteen million tons of coal, coke, and iron, do have modern facilities at their plants and at the mines?

Mr. STEVENSON. Surely.

Mr. SWITZER. If they did not have them, they could not move such an enormous traffic?

Mr. STEVENSON. No.

Mr. SWITZER. I think the remarks of the chairman are directed more to the revival of the packet traffic. So far as I view the situation, so far as coal and coke and this other tonnage is concerned, the terminals will be provided. They can not afford to have the public running into their terminals, because they have use for them every hour of the day. These concerns all have up-to-date equipment for loading.

Mr. STEVENSON. Yes. The New York Barge Canal has made a provision for the interchange of freight, such as you have spoken of.

The CHAIRMAN. After you gentlemen have provided an adequate water terminal at Pittsburgh, which will be controlled in the interest of the public, the committee will be very glad to give you a hearing at a later time, and will also have an investigation made under the authority of the Chief of Engineers. I did not intend to divert you unnecessarily, but I thought your case was such a conspicuous illustration that I might interject this at this time.

Mr. CAMPBELL. We have three members of the city council here.

Mr. FREAR. May I make a few inquiries of Mr. Stevenson?

Mr. SWITZER. He spoke for about an hour and a half before you came in.

Mr. FREAR. If there is any objection to my asking any questions, I will waive them.

Mr. SWITZER. I have no objection.

Mr. FREAR. I regret to say that I was called to one of the departments and could only get here a few moments ago, but I wanted to get a little more information in a personal way. This bill calls for a \$65,000,000 appropriation from the Government, does it not?

Mr. STEVENSON. Yes.

Mr. FREAR. For building a canal where?

Mr. STEVENSON. For building a canal from a point on Lake Erie to a point on the Ohio River.

Mr. FREAR. What is the length of the proposed canal?

Mr. STEVENSON. We utilize the two rivers, the Mahoning and the Beaver, and we build the canal at that point about 50 miles [indicating].

Mr. FREAR. And the \$65,000,000 is for that canal?

Mr. STEVENSON. No; for the canal and the rivers.

Mr. FREAR. What is the total length of the canal?

Mr. STEVENSON. A hundred miles.

Mr. FREAR. And \$65,000,000 is required for it?

Mr. STEVENSON. That is our estimate in normal times.

Mr. FREAR. Do Pennsylvania or Pittsburgh contribute anything toward that?

Mr. STEVENSON. Not under this proposition. We are looking at it entirely as a national war proposition.

Mr. FREAR. As a war proposition. How long will it take to build this?

Mr. STEVENSON. We think it can be built, and Col. Stickle has made the statement, and he is here and probably will corroborate it, that it will take three years.

Mr. FREAR. You expect the war will last longer than that?

Mr. STEVENSON. I do not know how long the war will last. I also discussed the question from the standpoint of peace being declared to-morrow.

Mr. FREAR. Do you know of any canal in the country that is a success?

Mr. STEVENSON. I do not know of any modern canal, except the barge canal.

Mr. FREAR. Is that a success?

Mr. STEVENSON. It is a little too early to say. We have not the data on that. The Government is so much interested that it is advancing the money to hurry the completion of that.

Mr. FREAR. The State of New York is paying \$150,000,000 for that canal. Is there any contribution being made by the localities immediately affected by this Ohio canal such as is being made by New York State?

Mr. STEVENSON. Not under this proposition. We are asking the Government to build this as a war measure, as a material necessity to open the waterway from the Lakes to Panama, and not only benefit Pennsylvania but benefit Michigan, Wisconsin, Minnesota, and the whole Northwest, which was suffering so for fuel last winter.

Mr. FREAR. Did you send any coal from Pittsburgh last year to Wisconsin, or any other States, by means of the Mississippi River, which affords traffic as far as St. Paul, according to the Army engineers?

Mr. STEVENSON. That coal was transported probably to Ashtabula and taken on steamers—

Mr. FREAR (interrupting). But was any sent by way of the Ohio and Mississippi Rivers?

Mr. STEVENSON. I do not think so.

Mr. FREAR. Was any coal sent from Pittsburgh to New Orleans by water last year?

Mr. STEVENSON. No, sir; there has not been any quantity of coal sent from Pittsburgh to New Orleans by water for two years. The reason for that is that we lost the coal business in the South. We can not compete with Alabama coal, or the New Orleans trade.

Mr. FREAR. Was there any coal sent to St. Louis last year?

Mr. STEVENSON. I do not think we sent any to that section.

Mr. FREAR. St. Louis is north; it does not compete, does it, with the Alabama coal?

Mr. STEVENSON. No; it does not. I think they probably used the Illinois coal, where they have a shorter haul.

Mr. FREAR. On what theory do you ask for \$65,000,000 from the Government for this canal of 100 miles when the State of New York has contributed \$150,000,000 for its own barge canal, which as yet has not been demonstrated to be a success?

Mr. STEVENSON. Since the war was declared the Government would not allow us to build it. It may be some time before the Government will allow internal improvements by the States.

Mr. FREAR. Not allow whom?

Mr. STEVENSON. I mean that we can not as a municipality or as a State engage in any general enterprise or improvement.

Mr. FREAR. Have you made such a proffer to the Government?

Mr. STEVENSON. No; but we understand that is the general order that is applicable throughout the United States.

Mr. FREAR. But New York went on with theirs.

Mr. STEVENSON. That was started before the war. They were working on it for 10 or 15 years.

Mr. FREAR. Do you think there is objection to that work at this time because of the war?

Mr. STEVENSON. I understand there is a standing objection to every enterprise outside of the improvement of roads, or something of that kind, as a military necessity; but no internal improvements shall be made.

Mr. FREAR. Would it not, then, operate against any proposed canal you have in mind, because of the necessity of utilizing labor for other purposes?

Mr. STEVENSON. It might; yes. But before you came in we suggested we could use some interned Germans. Many are working on the Welland Canal.

Mr. FREAR. Do you know of any canals—to return to the subject—that have made a success? The Government has built some canals, as you know. For instance, the Hennepin Canal. That was proposed to save \$20,000,000 a year in earnings to the growers of Iowa

in the shipment of grain. We have spent between \$7,000,000 and \$8,000,000 on that canal and we have had completed some thirty-odd locks, and the total amount of grain shipped was something like 6,000 or 7,000 tons, and the total shipments of all products on the canal only amounted to about 9,000 tons last year. Do you know of a condition that would warrant the expectation of this wonderful traffic for the Ohio Canal, of which you speak, that was not justified by the same argument as to the canal route from Iowa to Chicago?

Mr. STEVENSON. I think so; because we have here the most wonderful district in the world. This canal passes through the most wonderful section in the world, so far as manufacturing is concerned—the Pittsburgh district and the Mahoning Valley—and the tonnage is there.

Mr. FREAR. Unquestionably it is there.

Mr. STEVENSON. It is unquestionably there, and it is only a question of cost. If the transportation is low enough there will be plenty of tonnage for heavy freight. There was no such tonnage for the Hennepin Canal.

Mr. FREAR. Of course the people of Pittsburgh think it will be a success.

Mr. STEVENSON. The people of Pittsburgh do believe in it, having had the benefit of cheap water transportation on the Monongahela River.

Mr. FREAR. Has that been evidenced outside of the Monongahela River, where the coal is at the headwaters? Take the Mississippi River from St. Louis down. There is no traffic on that great waterway.

Mr. STEVENSON. That was all driven out because of discriminatory freight rates.

Mr. FREAR. But conditions are such that if there was a possibility of renewing that traffic now it would be again utilized.

Mr. STEVENSON. You can not buy a boat or get a barge now.

Mr. FREAR. That condition was true prior to the war.

Mr. STEVENSON. But we are brought face to face with a situation that did not exist before the war. Now it exists, and it is liable to be repeated, and it will be some time before this situation will adjust itself.

Mr. FREAR. There was such a situation shown on the floor of the House recently. For instance, speaking about the canals along the coast, which I see you mention here, it was shown that from the coal beds of Pennsylvania to Norfolk, and from the coal beds to Philadelphia, there was only a difference of about 50 cents in the rail cost of transportation; it was shown that it did not permit a sufficient differential, so that they could carry that coal from Philadelphia down along the coast, and they were not carrying it from Philadelphia for that very reason. That brings it back to the chairman's question about the fixing of rail rates. Do you think that would have to be brought about?

Mr. STEVENSON. I think it would. I think that was initiated by the Interstate Commerce Commission.

Mr. FREAR. Do you think Pittsburgh, for instance, would be willing to accept a raise in rail rates so as to increase waterway transportation?

Mr. STEVENSON. I do not think they would; I do not think there is any necessity to.

Mr. FREAR. Would not that have to be done in the case of Philadelphia in order to meet that situation which now exists to meet the situation in which Philadelphia is placed in railway rates in coal over Norfolk?

Mr. STEVENSON. Why would not Philadelphia feel it had that natural advantage?

Mr. FREAR. Is it a natural advantage when they are carrying it a much longer distance to Norfolk and only charging 50 cents more by rail?

Mr. STEVENSON. That is not a natural advantage.

Mr. FREAR. Philadelphia enjoys a natural advantage just as much as these waterway competing points enjoy it to-day. That has been proven by the commercial methods of the past. You would apply it possibly to a change of the entire method so as to raise the rates to these places that are enjoying favorable conditions, like Pittsburgh and Cincinnati and St. Louis, and other inland waterway points, in order to better the commerce?

Mr. STEVENSON. That is a very broad question.

Mr. FREAR. We have to discuss it in the committee and that is the reason I want to get your views.

Mr. STEVENSON. We have been suffering from discriminatory rates in Pittsburgh for many years. We have been paying 96 cents for hauling ore to Pittsburgh, while some of our competitors were getting it for 60 cents. For 25 years that condition has existed.

Mr. FREAR. Now that is corrected by the Interstate Commerce Commission?

Mr. STEVENSON. To some extent by the commission, and there has been a readjustment. If it had not been for its great natural advantages, God knows Pittsburgh would not have thrived. If there had not been that discrimination there would not have been anything like it in the known world. It made some very wealthy men in the steel business notwithstanding that.

Mr. FREAR. Those wealthy gentlemen who expect to profit by this canal are not putting up any money?

Mr. STEVENSON. No; that is true; not any more than in the case of any other Government proposition. In fact, the only thing the people own that there is in this country is the air we breathe and the rivers. That is all.

Mr. SWITZER. Regardless of the existing discriminatory railway rates and in the past there has been an enormous tonnage developed on the Monongahela River?

Mr. STEVENSON. Oh, yes.

Mr. SWITZER. Water tonnage?

Mr. STEVENSON. Yes.

Mr. SWITZER. Now, is it your belief that the same results would follow if this proposed canal should be constructed? Do you believe the same thing would happen regardless of any discriminatory railroad rates?

Mr. STEVENSON. Yes.

Mr. SWITZER. Of course, you would rather have it equalized?

Mr. STEVENSON. Yes. The argument has been made right along that line. Why would they not build two or three more railroads

from Pittsburgh to the lake? You can bring those railroads down to the Ohio River, but you can not get terminals at Pittsburgh.

Mr. FREAR. Now, a discussion of the Ohio River has been brought in. We have appropriated over \$59,000,000 for Ohio River improvements. The statement I made heretofore to the committee on the Ohio River project in my minority report was to this effect:

Major John Stewart filed with the committee the following statement:

"There are no municipal water terminals along the Ohio River. All terminal facilities are privately owned and are inadequate to provide for water transportation of any magnitude and are not constructed or equipped for joint rail or water transportation."

We have spent about \$59,000,000 on the Ohio River and still you say you have not shipped a ton of coal to St. Louis, which is near the mouth of the Ohio.

Mr. STEVENSON. St. Louis gets cheaper-hauled coal—Illinois coal. But the reason these terminals have gone is because the railroads have preempted all the river frontage, and they have done that by discriminating against the river traffic.

Mr. FREAR. We are all in favor of developing this river traffic, although we may not quite understand the position of those who are justifying the expenditure of money without utilizing the streams. If the streams are used after they are developed there is no question that the appropriations will be made without criticism, but the point that is being made to-day is that enormous appropriations are made without any development of water transportation, and Col. Townsend, of the engineers, has suggested that the Ohio River be developed so we may make an experiment there and ascertain whether it will bring results; but we have the New York Barge Canal and would it not be well to wait until it is determined whether that is a commercial success?

Mr. STEVENSON. But we are going to have some very serious times while we are waiting.

Mr. FREAR. But you are going to take three or four years to build the canal, and if we are going to die from freezing through need of coal, as you suggest, we will die in three or four years.

Mr. STEVENSON. If the Ohio was canalized with any degree of continuity from Pittsburgh down, many of these questions you have brought up would have been solved by this time; but until we have a continuous water transportation from Cincinnati to Cairo, not a dam here and a dam there, these questions will not be solved.

Mr. FREAR. Before this canalization took place you were shipping large quantities of coal to St. Louis and other points along the Mississippi River?

Mr. STEVENSON. Yes. We had the New Orleans trade before you canalized the Tombigbee and the Black Warrior. And there is another condition; they have brought the coal cheaper into New Orleans, and it is a very good coal, too.

Mr. FREAR. Do you understand that the Black Warrior River with its \$12,000,000 appropriation is a success to-day, as far as transportation of coal is concerned?

Mr. STEVENSON. They took our business.

Mr. FREAR. The Government is now proposing to build a hundred barges on the Black Warrior River, and the Shipping Board has

requested to do that because private capital has not taken advantage of conditions there created by the improvement of the river.

Mr. STEVENSON. The barge business is experimental to a great extent, and until it is fully developed private capital, I think, is going to be very timid about investing in barges for inland transportation, because they are experimental and the design must be very carefully thought out. As to the practicability, I think that is a question that will require some time to solve.

Mr. FREAR. I believe you are right.

The CHAIRMAN. These gentlemen have come a long distance, and we desire to give them an opportunity to be heard, and I suggest that the committee continue in session until a reasonable hour.

Mr. CAMPBELL. Do you want to take up anything along the line of terminal facilities? If so, we want you to hear from these gentlemen as to Pittsburgh's attitude. We would like to have you hear Mr. Herron now.

STATEMENT OF MR. JOHN S. HERRON, PRESIDENT PITTSBURGH COUNCIL.

Mr. HERRON. Mr. Chairman and gentlemen, we are here to-day because we know what it is to suffer from lack of transportation facilities in the city of Pittsburgh. A great many of our mills last year had to shut down because they could not get coal. Coal was all around them. The city of Pittsburgh itself was fearful that it might have to curtail the use of water because it could not get the coal cars. We had to use automobiles at a distance of only 7 miles from the mines. The Canadian Government was sending cars to the southern district to be loaded and shipped for Canada, and they awakened to the fact that railways coming into the city of Pittsburgh were using their cars a few times to transport coal to Pittsburgh, and when they found it out they made a complaint to Washington and that was stopped. The topography of the city of Pittsburgh makes the construction of railroads very expensive. We thought we were going to get considerable relief from the Wabash system, but we found it did not answer. Something has been said about the cost of the canal, and because a great many people do not understand it they are feazed at the cost. But New York State is our neighbor, and we know that in the last 25 years three different propositions have been handled in reference to their canal. First, they had a 6-foot canal, and then they thought by expending about \$9,000,000 they would deepen it to 9 feet and they would have the proposition solved, and later they found that they must go ahead and spend a great deal more, because they realized what it meant.

You will notice the map of New York, showing the canal there [indicating]. Between the cities of Syracuse and Utica, N. Y., an extent of 60 miles, it is perfectly level, and they did not need a single lock, and yet up at Lockport, at the far end of the State, they found it necessary to have several. This construction makes it expensive, and yet the people of New York, way down at the end of the State, would be absolutely isolated if they were dependent entirely on cars. It is only the canal that makes it possible; it is the terminals along the New England front that bring Long Island

steamboats into New York, and we are, of course, only a short distance from Lake Ontario; we are only a short distance from Lake Erie, and we might as well be a million miles away, because we are shut off from it; and we know what it means if we can only get transportation free from any obstruction to Lake Erie, and we know that by the construction of this canal we are going to have that, and we know the American public are very skeptical, and we know how hard it is to convert the average man to appropriate money. We are trying to take advantage of the conditions that now prevail, when everybody realizes the inefficiency of the railways, and we are coming here to ask you to help us.

We have not any right to think this war will be over soon, though we all hope it will. There is not a man sitting around this table to-day who four years ago would have had any idea that we were going to be in the war. We are trying to do something to help, and we are absolutely certain that Pittsburgh and the entire world will profit from it.

We know the coal is there; we know the ore is at the other end; we have the coal, and they have the ore. New York City and Chicago and all of the large cities need the finished product we make and sell, and it is to get that back and forth that we desire this canal. Gentlemen, we realize the position you are in, and we know how easy it is for some man to get up on the floor of Congress and ask a question that might be simple and yet be hard to explain; but we know that, in the words of Grover Cleveland, it is a condition and not a theory that confronts us. We need the canal, and you are our only hope, and we have come to ask you to help us, because we realize that we have not any chance of convincing the taxpayers of the city of Pittsburgh that they ought to go and erect big, modern terminals when the canal is but a dream; but if you will give us the canal—give us some visible means of it, so that we can see something started—we will contribute the terminals. We have the river; we have the wharves; it is just a plain question of constructing suitable landings and paraphernalia for unloading, and we will make headway in that direction once you show us the canal.

Mr. FREAR. The inland waterways committee's report was to the effect that of over 4,000 miles of canals in this country, over one-half have been abandoned, and about one-half of all the canals, if my recollection is correct, were in the State of Pennsylvania. Can you tell us why that condition exists in Pennsylvania?

Mr. HERRON. It is pretty hard to explain, but the competition of the railroads was so great that they were able to convince the people there that they could bring the railroad right to their doors and that it was necessary for them to bring their finished product to the canal. The site of the Union Station in Pittsburgh was one of our old canals. That was when the railroad was all-powerful, and the average citizen takes the path of least resistance and he thought the railroad was going to be the absolute last word. You could not find a Member of Congress five years ago that would say the railroads would find themselves in the condition they were last winter, when they threw their hands up and said they were helpless.

Mr. FREAR. Of course, a condition arose caused by favored shipments due to war necessity which caused congestion at many points;

for instance, at Hog Island and elsewhere, due in part to a conflict of authority in directing shipments, but the railroad companies themselves were not responsible for that. That was due to lack of coordination of different Government agencies as well as of the various railroads.

Mr. HERRON. The same thing existed before, but we did not have any way of making the people know about it. At this time it was the Government which was waiting for munitions and other things and they had to have them, but the poor farmer in the West knew it, who has time and time again seen his crop rotting in the fields, who has seen his grain rotting and could not move it; and many men in the coal business in Pittsburgh would tell you that they could not get cars, and they were almost insulted when they asked for them.

Mr. FREAR. If this question should come up on the floor and it was stated that \$65,000,000 was going to be appropriated for the canal and that everybody is going to contribute, the farmer of the West is going to contribute, is it not natural that some one should ask the question why the Hennepin canal in Illinois had not relieved the western farmer and why over one-half of the canals of Pennsylvania have been abandoned? Is not that the query which will naturally come up? And the farmers and the others who are asked to contribute will ask, "Why is it my duty to contribute to this Ohio canal when the State of New York builds its \$150,000,000 barge canal at State expense without asking contribution?"

Mr. HERRON. The answer to that is that the State of New York is not a producing State in the sense that Pennsylvania and Ohio are. All you use their territory for is to bring from the West to New York City the products of the West. If it were not for that is there any particular reason why a man in Chicago would ship to New York? Philadelphia would be the right place, but the Allegheny Mountains isolate Philadelphia. New York has a nice level condition.

Mr. FREAR. In other words, New York has nothing to do with the production, whereas in Pennsylvania those who have to do with the production and ought to be very largely interested in the question of production and the disposing of their products, are to-day asking the Government to spend the Government's money to the extent of \$65,000,000 or more in marketing their products?

Mr. HERRON. Yes, sir.

Mr. CAMPBELL. This is not confined to the Pittsburgh district.

Mr. HERRON. The gentleman understands I am now speaking for Pittsburgh; I do not know anything about the other.

Mr. FREAR. This is only for the purpose of general illustration. There was one suggestion that I do not think there should be any misunderstanding about—the question of New York being isolated, by reason of the New York Barge Canal. Transportation from the West which goes to New York is largely by rail; not one-tenth of 1 per cent went by the Erie Canal prior to the beginning of this year, and it is largely a questionable proposition as to how much the canal will be utilized.

Mr. HERRON. Under the old system of building canals they tried to take care of the sides of the bank by making them as they pave the streets; they built the sides with paving blocks, and the traffic was slow. Then when they tried to hurry up and put the motor-driven

or steam-driven barges there the experts claimed that the wave had a bad effect on the bank, and they regulated the speed on that account, and the boats were not allowed to go very fast. It was just like compelling a great, big, powerful automobile, capable of making 60 miles an hour, go at 12 miles an hour. This new barge canal which is going to take care of the traffic will be fixed so that they can cut down the time in traveling. I will suggest, in this connection, that the people in New York City, who may be supposed to have a pretty good acquaintance with the conditions there, believe that one reason why this barge canal will not be a success is that the Welland Canal is going to carry vessels that will transport shipments from the Lakes to the sea without the necessity of rehandling, and that they will have to have a greater depth than 12 feet in that canal. They believe that they will possibly have to have 24 feet, and when that time comes you gentlemen are going to be confronted with a much larger proposition; you will have the St. Lawrence River, and \$65,000,000 will not go very far. The St. Lawrence River has the Thousand Islands there, with a lot of little channels, and it is a tremendous proposition.

There is another thing. The canal around Lake Ontario belongs to the Canadian Government, and our Government has been asked to build one, but we have just let the matter alone.

Mr. FREAR. We have made surveys.

Mr. HERRON. That is about all.

Mr. STEVENSON. Mr. Follansbee, who represents the manufacturers of West Virginia, will be the next speaker.

**STATEMENT OF MR. W. U. FOLLANSBEE, OF FOLLANSBEE, W. VA.,
MEMBER OF THE LAKE ERIE & OHIO RIVER CANAL BOARD.**

Mr. FOLLANSBEE. I represent the West Virginia Manufacturers' Association, of which I am a director. I am also a member of the Lake Erie & Ohio River Canal Board appointed by Gov. Brumbaugh, of Pennsylvania. I want just briefly to make some mention along the line of the interrogatories that have been made. The question has been asked whether shippers will take steps to have the railroads put up their freight rates in order to further the waterways. Now, no man is going to do anything to increase his costs. I am a comparatively small manufacturer, but you have had the absolute evidence during the last two or three years, when the manufacturers all over the country signed petitions by the thousands to the Interstate Commerce Commission that it put up freight rates, because the manufacturers recognized that in pursuance of the policy of the railroads for years to kill water transportation they had become practically bankrupt. The reason Mr. McAdoo has been placed in charge of the railroads of this country is because the railroads did not have the money to operate on account of the foolish policy of making rates so low as to be able to kill water transportation. Now, the question that you have asked has already been answered by the manufacturers.

Mr. FREAR. Has not this petition for an increase of rates been a petition for 5 per cent or 10 per cent, horizontal increase, or whatever the rate may be? It did not affect that particular locality. Were

Pittsburgh men willing to have their rates raised because of the lower waterway rates, above the waterway competitive rates they now enjoy? I think that is the question the chairman had in mind.

Mr. FOLLANSBEE. I think that will also be answered by this fact: I am a buyer of coal. The rate on coal was advanced 15 cents per ton: my mill at Follansbee, W. Va., was paying the freight rate of 20 cents per ton, and that was advanced to 35 cents per ton without any great protest. We felt it was a little unjust when they advanced that rate 15 cents per ton or 75 per cent, while they only advanced the rate to Chicago in the neighborhood of 8 to 12 per cent, but we paid it. That is history. We paid it. Is that question answered? I think it is very important.

Mr. FREAR. Do you mean to say that the city of Pittsburgh to-day and the people of other inland waterway towns are ready to submit to an increase of railway rates so as to permit waterway traffic to compete, as was suggested by the Chairman?

Mr. FOLLANSBEE. I think you put the question just wrong side foremost. The people of Pittsburgh, or all other manufacturers, are willing to increase the freight rates on the part of the railroads to make the railroads properly operative; now we have the spectacle of the railroads practically being bankrupt because they have not secured sufficient revenue to allow their roads to buy their locomotives, to buy their cars, and other equipment, and that is the trouble with the situation; they have to face the fact that the railroads must have largely increased revenues, and that the railroads no longer can make rates that will put the waterways out of business; and then the waterways will come along and have their natural development.

To show that I am not talking through my hat I will say that I have put my good money into a packet line between Follansbee and Pittsburgh, and the Wheeling people have put their money into it, and they have searched the river for boats and have bought two boats.

The CHAIRMAN. Is that the line that Mr. H. R. Wyllie of Huntington, spoke about some time ago?

Mr. FOLLANSBEE. I do not know him. He is probably farther down the river. I refer to the Liberty Transit Co. Mr. Shaw is a director in the company. To show you that we are not indifferent to waterway development, I say we have put our money into it.

Now, take this railroad question. I have not any quarrel with the railroads; the railroads are my greatest friends. I must depend upon the railroads to ship my goods all over the United States. I would not go to the railroads and say, "You are foolish to make me a 20 cent freight rate;" I would not go to the railroads and say, "Put up this freight rate to 50 cents so I will stop shipping coal on your line and bring it in by boat." You know that is not human nature. All the railroads of the country are now in the hands of the Government, and it is time that they were. It was necessary to the winning of this war, because the railroads were so impotent.

Let us look at our canals of Pennsylvania. Why were they abandoned? You know how the railroad development came along. I have heard my father and mother tell many times how they came from New York and Philadelphia to Pittsburgh over the canal and it took them three weeks to do it. Of course they would not after-

wards travel by canal when they could go by rail to New York in one night. How have the railroads developed? You take the railroad of 30 or 40 years ago and let it stand still, and it would be out of business as compared with the railroad of to-day. I am old enough to recall when we shipped 12 tons in a car, and now Mr. McAdoo is asking us to ship 120 tons. Now, canals have stopped with a little 3 or 4 foot depth. The impetus of the railroads coming along was so great that it was psychological that the canals stood still. That is just a little illustration.

The CHAIRMAN. Those new managers of the railroads told the people that the railroads could carry all the traffic, and the people believed it?

Mr. FOLLANSBEE. Yes.

The CHAIRMAN. And they came to depend absolutely on the railroads for the movement of traffic?

Mr. FOLLANSBEE. And the railroads made their word good, too, for a long period of years. Now, as to the question of competition. The Baltimore & Ohio Railroad for years was known as the most successful and one of the biggest dividend payers of the railroads, under old John W. Garrett. In that day they paid large dividends regularly, and those of us who were taking notice in those days could see how the B. & O. was going back and the Pennsylvania Railroad was going forward till it was the big competing railroad, and people would not use the B. & O. when they could get the Pennsylvania. The Pennsylvania was improving its equipment and the B. & O. was paying large dividends and becoming obsolete, and when John W. Garrett died the B. & O. almost died, because everything was worn out, and it took years to build up the B. & O. to be an ordinary, decent railroad such as it is to-day.

Mr. FREAR. They are all practically controlled now by the same capitalists.

Mr. FOLLANSBEE. But the B. & O. went obsolete exactly like the canals went obsolete, because they would not spend money on proper rails and proper cars and locomotives, and when John W. Garrett died they had to quit the payment of those large dividends so as to be put up to date.

Mr. FREAR. What is the situation from St. Louis to New Orleans, where there are no canals and where the Mississippi River waterway is better than it was before, and river commerce has decreased 95 per cent?

Mr. FOLLANSBEE. I do not know.

Mr. FREAR. Why haven't we traffic there along the river?

Mr. FOLLANSBEE. I do not know; I have not studied that subject. I think it is a very proper question.

Mr. FREAR. Have you any idea what the traffic is from St. Louis or Cincinnati down the river on the rails? On both sides of the river the railroads are carrying traffic constantly. It all resolves itself back, does it not, to the railroad question which you have suggested, but not to the fact that the canals or the waterways are not as good as they ever were, because the Mississippi River is far better now than it ever has been before?

Mr. CAMPBELL. Nature put the iron ore and the fuel in the Pittsburgh district; the traffic does not exist in the Mississippi Valley.

Mr. FREAR. You ought to hear the Mississippi River Valley people talk about it, and you would think traffic existed there.

Mr. SWITZER. I think the gentleman was answering your question. I believe you stated that one-half of the canals were in Pennsylvania, and I think he was answering your question by saying that these canals were antiquated.

Mr. FOLLANSBEE. They were then, as compared to the railroad development.

Mr. FREAR. By analogy I was comparing it to the condition which exists on the Mississippi River, where antiquated river conditions have been greatly improved and traffic has greatly decreased.

Mr. FOLLANSBEE. I never took any interest in waterways whatever until Gov. Brumbaugh asked me to go on this canal board. I have tried to look at the different phases; it did not make any difference what views were presented in opposition they were all swept away since we have got into this war. I think it would be ridiculous for any set of men to come down here and ask this Government to spend one cent for selfish purposes, either personal or local. Absolutely when we come to ask the Government to build this canal it is because of patriotic motives and because we are in the war, and, God help us, we have got to get out of it. There is nothing that influences it as much as this railroad transportation. Mr. McAdoo will tell you if you come over here [indicating on map]. We hear about cars being needed, and cars are not in it with locomotives, and locomotives are not in it with the fact that you have got a great big bottle with a very little neck, and you can not get through. Why, the business men of Pittsburgh before this third liberty loan campaign started came down here, and the best Democrats in Pittsburgh were the ones that came down, to request Secretary McAdoo in his capacity of Secretary of the Treasury to let a regiment of the boys come to Pittsburgh in connection with the 'liberty loan. His answer was: "You are asking the impossible. I can not permit one unnecessary car on the railroads in this congested section."

Mr. FREAR. They are seeking to prevent congestion everywhere.

Mr. FOLLANSBEE. There are certain points where they are not congested. You have no congestion out here [indicating]. In the same line of business I am in, in Canton, Ohio, and other towns out there they are having their goods shipped just as they make them. We are shipping to-day 300 tons that we have had ready for shipment since last December to Philadelphia.

Mr. FREAR. Do you understand that the railroad traffic is the same now as it was before the war outside of the congested districts?

Mr. FOLLANSBEE. No.

Mr. FREAR. I know the potatoes in my own contry are rotting in warehouses because they can not be shipped to the closest points.

Mr. FOLLANSBEE. That is indicative, but there are degrees.

Mr. BOOHER. Is not part of the reason for that the fact that potatoes have become so cheap there is no sale for them?

Mr. FREAR. This was during the winter when we were paying \$2 a bushel for potatoes.

Mr. FOLLANSBEE. You have got to have a lot of this transportation in the spring and summer and fall, and not in the winter when you can not have it. There is the principle back of the question; you

have got to utilize the facilities when you can make them move instead of when they are sewed up.

I think this labor question is very important. All of us that are employers of labor realize that we not only want to have the Germans interned here because they are living here and are pro-German, but I think we want to get the captive Germans for this country. We are using our bottoms in transporting tons of food to feed the Germans that the allies are capturing and the bottoms come back empty. Now, in decency to our allies—France, and England, and Italy—who have been bearing the burden—bring our empty vessels back with captive Germans in them, put them to work on your public works and you will make good citizens of them over here, too, and they will not want to go back to Germany.

Mr. BOOHER. Then I would not be in favor of it. [Laughter.]

Mr. FOLLANSBEE. I have had a son in the English Army for two years and a half, and I am on record as saying that the only way to make peace is when we have got our hands on the Kaiser's throat, but we do not need to overlook what is available in this labor question. If it is necessary send them back, but get them over here and make them work and do not be using bottoms for carrying food as we are now for feeding German prisoners instead of for our allies. One man can watch a good many of them.

I do not think there is anything else I can think of at the present time. I am very glad the Pittsburgh councilmen are here, so that they will realize the tremendous importance of this matter.

Mr. SWITZER. What is the capital of this transit company?

Mr. FOLLANSBEE. The Liberty Transit Co. started out with a good deal of a splurge on the part of some rather inexperienced enthusiasts, and they talked of \$500,000 capital, with the lack of the realization that as the river was canalized only to Parkersburg the business would be limited between Parkersburg and Pittsburgh, and possibly up to the Monongahela.

The CHAIRMAN. What is the distance?

Mr. FOLLANSBEE. I think something like 150 miles; probably more than that. It is between 150 and 200 miles. They went into it with the idea of building boats for the packet trade, building steamers for the barge trade, and they found it was going to take a very long while to get them on account of the difficulty in getting labor and in getting iron. Then the question turned up if they went into as large a scheme as that they might have facilities beyond the business. What they had in mind was the fully and completely canalized river; if it was completely canalized, their project would have been fine. So they are operating along on the basis of \$75,000 or \$100,000 capital, with the readiness to increase that as they can procure boats. But this is a very earnest effort of the Wheeling Commercial Association.

Mr. FREAR. What is the draft of the boats?

Mr. FOLLANSBEE. They are trying to get very low draft—4½ feet—in the hopes that when the dams are down they can operate.

Mr. FREAR. What kind of traffic do you expect to handle?

Mr. FOLLANSBEE. These boats are for the packet trade.

Mr. FREAR. For the coal trade?

Mr. FOLLANSBEE. No; for the packet trade, the town-to-town traffic. Their desire also is to buy steamers and barges for the

heavier trade, where you can run a barge up to a sewer-pipe works or a mill or a brick works and load several hundred tons and let the next steamer that comes along tow that barge to its destination.

Mr. FREAR. What is the reason that the traffic was lost that existed years ago?

Mr. FOLLANSBEE. It was largely because of the irregularity of the river traffic. The Pittsburgh men who have lost money in the river business have said it was largely because of the large investment they had, and they were only able to operate their plant a few months in the year.

Mr. FREAR. But the traffic was much greater years ago on the Mississippi and the Ohio than it is to-day. That was before you had any better conditions in the river.

Mr. FOLLANSBEE. Well, you did not have your railroads and your low rates; it comes right back to that. Do not think I am extreme on the railroads. As a manufacturer I am for any man that reduces my cost.

Mr. FREAR. Is there any difference in the condition of the railroads now and six years ago?

Mr. FOLLANSBEE. Why, the railroads have got to put up their freight rates to live.

Mr. FREAR. It is with that promise in your mind that you are taking chances with the packet line?

Mr. FOLLANSBEE. Yes; and for the very good reason that the railroads are not able to handle the freight that was offered. I was in the Pittsburgh district a day or two ago to see about these boats being purchased and about the route from New Orleans, and I was telephoned by a Pittsburgh party, who said: "Do you know if you have a cargo from Cincinnati to Pittsburgh?" I said, "I don't know." He said, "I will give you one." He was speaking for a Cincinnati man that had a trade for that field. As we are in the neighborhood where you gentlemen have spent a good deal of money I think we should give you encouragement. A great increase has already occurred in the Monongahela and the Ohio in the transportation of heavy materials, and we want you to realize that it has actually started.

The first speaker mentioned the development at Clairton. The United States Steel Corporation is putting in \$10,000,000 there as a starter, mind you, in the by-product coke, whereby they will take the coal from the upper Monongahela River, bring it to Clairton, convert the coal into coke, and distribute it to their works on the Monongahela, Allegheny, and Ohio Rivers. The La Belle Iron Works, of Steubenville and Wheeling, have their by-product coke plant a little above the place in which I am interested, in Follansbee, W. Va. I happen to be the director of a coal company. La Belle Iron Works had the record last year of turning out more steel in 1917 than they did in 1916, and I believe it is the only steel works that had a record like that, and the only reason was because they were getting the coal by river for the by-product coke plant at Follansbee and sending it over the Ohio River to their blast furnaces in Steubenville. The La Belle Iron Works have gone up the Allegheny River and bought I do not know how many acres of coal which was condemned

by the H. C. Frick Coke Co. years ago because they said it was no good for the beehive coke, but the coal is just right for by-product coke.

Mr. FREAR. What is that to be used for?

Mr. FOLLANSBEE. To be transported down the Allegheny River, down the Ohio River, to the by-product coke plant at Follansbee and there turned into coke. The Wheeling Steel & Iron Co., located at Wheeling, with blast furnaces at Wheeling, have done the same thing. They have gone up to the head of slack water on the Allegheny River and purchased additional acreages. The Crucible Steel Co. of America, with its enormous plant at Midland, is transporting all its coal down the Monongahela River for its blast furnaces there. They are doing the same thing with respect to water freight in Pittsburgh. Have you passed an ordinance enabling them to put out facilities in the La Belle Works in Allegheny, Mr. English?

Mr. ENGLISH. They will not pay enough rental for the use of the water front.

Mr. FREAR. What are they making for the Government?

Mr. FOLLANSBEE. The Crucible Steel Co. is supposed to have a lot of orders for the Government.

Mr. FREAR. The Government is interested here, when it is putting up all the money.

Mr. FOLLANSBEE. Undoubtedly.

Mr. FREAR. In many cases, for instance, on the Pacific coast localities contribute one-half of the cost of putting in a waterway project. That is true of other places, and in the State of New York the State contributed the whole \$150,000,000 that has gone into their canal proposition. As has just been suggested, the people who are to get the great benefit in shipping their products come to the Government and ask for \$65,000,000. They do not say, "We are going to contribute a few thousand dollars of this amount. New York says, "We will contribute the whole amount." That is a question that appeals to us. What special reason have you to apply to the Government to put up the total amount of the money investment? Where does the Government or how do the people get the return?

Mr. FOLLANSBEE. I believe thoroughly that the localities should participate in local canals, and I have never changed in my own personal opinion, but when it comes to as large a thing as this I think the Government must participate very largely. Your very plan was contemplated by those people, and it was mentioned by Mr. Stevenson. He told us that the Pennsylvania, Ohio, and West Virginia Legislatures have passed legislation whereby the counties were to vote on issuing bonds to provide money for doing this and possibly coming to the Government and asking to provide the terminal at the lake. You can realize the length of time it would take to have all these different municipalities pass legislation permitting the sale of these bonds, and at the present time we are right up against the prohibition of the sale of anything with the Government making its demands for loans. And that is the prime reason we are here to-day. Here is the project that you mentioned, except nothing further can be done, and that is blocked.

The CHAIRMAN. That same proposition was up in Mr. Osborne's community, or Mr. Lee's, as to the Pacific coast cities or harbors there. They have largely a question of harbors, except in the case of the Sacramento River. On the lower Mississippi they make those bordering on it pay one-third of all the money.

Mr. FOLLANSBEE. If you gentlemen passed an act conditioning it on the contiguous territories contributing, say, one-third, I think they would jump for it.

Mr. SWITZER. That merely goes to the levee construction, as to one-third.

Mr. FREAR. Of course, the \$45,000,000 appropriated covers navigation and all purposes in that Mississippi project you referred to, Mr. Chairman. The \$10,000,000 which we are appropriating under the sundry civil bill this year covers navigation and for all purposes.

The CHAIRMAN. Yes.

Mr. FOLLANSBEE. You realize this, of course, that the delay is the fatal thing. You know how long it takes to create sentiment in communities, how long it takes to pass ordinances, to have votes, and all that. That is fatal now that this war is on; it is absolutely a fatal thing. It might be possible to get contributions from individuals, from manufacturers' concerns; I don't know, I can not say. I can only speak for myself on a proposition of that character, but there would be little excuse for us to be here if we were not in the war. There would be no excuse if the railroads had not fallen down so tremendously during the year, and they will fall down worse in the future.

The CHAIRMAN. How long do you think it is going to take to construct this proposed canal; three or four years?

Mr. FOLLANSBEE. I think three years would be the lowest estimate.

The CHAIRMAN. That is based on the proposition that you could engage the labor without difficulty?

Mr. FOLLANSBEE. Yes; you must have the labor. You, of course, realize that the Government has the power along those lines that no individual has; the Government could commandeer the labor.

The CHAIRMAN. Do you suppose when the Government is unable to get the labor for the farms to-day to furnish the food, they would commandeer the labor to build a canal from Pittsburgh to Lake Erie?

Mr. FOLLANSBEE. It would be very doubtful, but it is gratifying to know that the crop prospects are very good. They have been taken care of up to the present. The garnering of them is going to take a lot of men. We do not want to look foolishly at this; we realize the points you have raised. But we could utilize these prisoners who are on the other side. We have no more interest in these propositions than you have; it is the general proposition, and we are endeavoring to do the best we can to contribute toward winning the war.

Mr. STEVENSON. I would like, now that we are discussing the labor views involved in this question, to introduce Mr. Miller, of the Iron City Central Trades Council.

STATEMENT OF MR. CHARLES L. MILLER, IRON CITY CENTRAL TRADES COUNCIL.

Mr. MILLER. Mr. Chairman, while there has been a good deal of discussion on this question of labor, I just want to say in connection with the question that the railroads being congested at this particular time has only proven to us how we were subject to congestion at any time when there is an extraordinary demand, and shows to my mind the necessity for a project of this kind. In connection with the Government owning this proposition, there is no question in my mind that this would be a great saving to the people if the railroads were to continue to be privately owned; if the Government would elect to expend the money to put this proposition into workable shape even if no boats were run on it, it would mean a saving of nearly three times as much to the people of this country, because we can readily see what the activities of the privately owned railroads got us into by the systematic destruction of the waterways, as has been explained by the gentlemen here.

So far as this question is concerned of the Government being responsible for the building of this proposition, I believe that can be explained. We in Pittsburgh should not be asked to be responsible for the expenditure of this money when it is being plainly outlined that the valuable resources of this district are beneficial to the people of Wisconsin, Michigan, and all through the lake districts; they go down into the other districts where they gather their resources from the ores, and so on, and the thing is a national proposition. It is national in its scope, in its character, and in my opinion the Government should develop it. We are primarily here asking for this because of the fact that the war is on and we think it is one of the essential things necessary for the winning of the war.

I say this, that in addition to that if the war would cease tomorrow it is absolutely essential, in my opinion, anyhow, because as people we grow in numbers by virtue of our facilities, and if we have not got those facilities we remain congested until the facilities are afforded, and likewise we grow in proportion and numbers.

So far as the question of the labor situation is concerned, I believe it can be answered in two or three words. I will say that there are not as poor conditions anywhere existing for labor in the mechanical trades as exist in this whole section from the Monongahela River, including practically the entire Monongahela River down to the Wheeling district in the section where, in my opinion, the labor will be drawn from to build this proposition. Practically every plant works at a 10-hour or 12-hour day in a few instances; so as far as the labor proposition is concerned it will solve itself, because we need relief, and our people are leaving there continuously, going to other sections, here and Philadelphia and other places, where there are better conditions; but you know a man likes to stay home if he can. So I do not see that there will be any pronounced labor trouble.

Mr. FREAR. In the coal production in Pennsylvania to-day is it equal to or below the average production?

Mr. MILLER. The coal production is taken care of by the miners' union in that particular section.

Mr. FREAR. In Pennsylvania is it true that the coal production is far below normal conditions at present?

Mr. MILLER. In what respects?

Mr. FREAR. In the mining of coal. I am asking for information.

Mr. MILLER. So far as the details of that are concerned I am not familiar.

Mr. FREAR. The point I want to ask about is whether the shortage of labor in the mines is responsible for the present condition, or what reason is there for that condition of shortage in coal production?

Mr. MILLER. As I see the matter of the production of coal, it is dependent a good deal upon the facilities of transportation.

Mr. FREAR. But the statement is made that the production of coal is far below normal at the present time. I do not know whether that is true or not.

Mr. SWITZER. Not bituminous coal.

Mr. FREAR. Where would you get the employees for this work?

Mr. MILLER. I say the employees are right there now in the manufacturing districts of the Pittsburgh district.

Mr. FREAR. Unengaged?

Mr. MILLER. Not wholly. There are idle men around there at the present time, numbers of them, that follow this line of work for a living, construction work mainly. I am directly interested in that, and I know there are a number of men available.

Mr. FREAR. You are engaged in construction?

Mr. MILLER. In the construction end of buildings, and work of that kind.

Mr. FREAR. Have you ever engaged in building anything of this kind?

Mr. MILLER. I am representing the union on this.

Mr. FREAR. The labor union?

Mr. MILLER. Yes; the engineers' union, and there are engineers in construction work.

Mr. FREAR. What have you constructed, if you will pardon me for the question?

Mr. MILLER. Our men are employed in the construction of all building projects and railroad projects.

Mr. FREAR. I thought you meant waterway projects.

Mr. MILLER. No; not in big propositions around there; we have had smaller propositions, but it is right in line with the same class of machinery, steam shovels and donkey engines and traveling cranes, and work of that kind.

Mr. STEVENSON. I would like to call on Col. Stickle, the United States engineer, to tell about the length of time it will take to construct this canal.

**STATEMENT OF COL. H. W. STICKLE, CORPS OF ENGINEERS,
UNITED STATES ARMY, DISTRICT ENGINEER OF PITTS-
BURGH DISTRICT AND WHEELING DISTRICT.**

Col. STICKLE. Mr. Chairman, I would say first that I am here by authority of the Chief of Engineers, but there is no assurance that any statement I make will be approved or disapproved by that authority. As to the time of construction of this canal, I have looked

it over in a general way, and I would say that if war-time conditions, emergency conditions, were considered to control, involving the presence of sufficient labor, the ability to secure sufficient equipment, the elimination of all possible red tape, the placing of the work in charge of one competent and capable executive; and if sufficient funds were available at all times to prosecute the work, the time of construction, judging from my experience, should be two years; that a maximum of six months for preparation of plans, location of surveys, the organization of forces should be added to that, making a total of two and one-half years under those conditions which I have stated.

The CHAIRMAN. Colonel, while you are before the committee, I would like to make a statement and perhaps ask you a question. This waterway from Lake Erie to the Ohio, as far as I recall, has never been surveyed under authority of Congress by the Corps of Engineers?

Col. STICKLE. I think that is true.

The CHAIRMAN. But there have been examinations, and particularly one recently which was referred to by Mr. Stevenson. I assume you have given some study, more or less, to that, and I will ask if your study of it justifies you in stating whether there are any unusual engineering difficulties?

Col. STICKLE. From personal knowledge of the subject, I could not say; but from the character of the engineers who have reported on the subject, I feel very confident in saying the engineering difficulties are only ordinary.

Mr. FREAR. You say two years?

Col. STICKLE. Yes, sir.

Mr. FREAR. Now, you have made a careful study of all the conditions surrounding that which would cause you to come to that conclusion?

Col. STICKLE. I have considered everything as well as I could.

Mr. FREAR. How many men would be required?

Col. STICKLE. Probably a force of 10,000 men.

Mr. FREAR. Where would you get the 10,000 men?

Col. STICKLE. I would use interned Germans captured German soldiers and I would turn all of the liquor-traffic men into the work.

Mr. FREAR. How would you do it under the law?

Col. STICKLE. I am not a lawyer.

Mr. FREAR. But you are suggesting about the way you are going to complete it in two years. We have to consider the law, so we want to know how it could be done.

Col. STICKLE. I suppose it would be competent for Congress to place conscription on the books for any labor necessary for any proposition connected with the war.

Mr. FREAR. You would call this connected with the war?

Col. STICKLE. Personally, I think it is a vital feature of the war; it is a very important feature of transportation.

Mr. FREAR. In what respect?

Col. STICKLE. I know the importance of the Pittsburgh district; I know how they have been handicapped in the last year for lack of transportation, and I know how this canal would give relief.

Mr. FREAR. Will this canal relieve the situation in regard to the shipment of munitions, and in marketing of war materials?

Col. STICKLE. There is no doubt of it.

Mr. FREAR. In what particular, and how?

Col. STICKLE. If the ores could be delivered in the Pittsburgh district in sufficient quantity to keep the factories working it certainly would increase the production, and it would certainly relieve the railroad transportation to carry those completed manufactures to the east.

Mr. FREAR. That might apply to any community. You speak of 10,000 men to do this work. You say take the men from the liquor traffic?

Col. STICKLE. I just made that as a suggestion.

Mr. FREAR. We have not any interned Germans here; you mean the Germans who are living in this country?

Col. STICKLE. I think we have some; I do not know how many.

Mr. FREAR. You do not know how many?

Col. STICKLE. I have no information. I think we could get more. [Laughter.]

Mr. FREAR. How would you proceed to get them for development purposes? Would you go out and take Germans because of their names?

Col. STICKLE. No; I would take no man if we had nothing against him, whether he were of German descent or not.

Mr. FREAR. We have a department engaged in that now. You would not ask court-marial proceedings to do that?

Col. STICKLE. No, sir.

Mr. FREAR. You think 10,000 men could do this work?

Col. STICKLE. I think they could.

Mr. FREAR. How fast could they progress on this; you say two years or two and a half years?

Col. STICKLE. It would require the equivalent of 60 steam shovels, possibly some of them dredges and some drag-line scrapers; 60 steam shovels working two years would do the excavation there.

Mr. FREAR. Two years from the time the work was authorized by Congress?

Col. STICKLE. I added six months for securing plans, etc.

Mr. FREAR. Two years after the authorization comes from Congress? Presumably it would not come in this last appropriation bill and get through this session. In that case it would not be done for practically three years from the present time?

Col. STICKLE. Yes, sir; if the bill were not passed this session.

Mr. FREAR. You think if you could cut the red tape it could be made in three years?

Col. STICKLE. In the time stated under those conditions.

Mr. FREAR. Have you made a careful examination of the conditions?

Col. STICKLE. I have not been over the route.

Mr. FREAR. What is your estimate based on?

Col. STICKLE. On the reports and maps.

Mr. FREAR. Do you not know that the Army reports show that in nearly every case the cost is higher than the estimates for waterways?

Col. STICKLE. I have said nothing about cost. If the estimate of \$65,000,000 was correct at the time it was made it would be insufficient at this time.

Mr. FREAR. You have had experience, and is it not also true that such work is continually delayed due to lack of existing appropriations and conditions which necessarily are caused through the action of Congress?

Col. STICKLE. You mean in the river and harbor work?

Mr. FREAR. Yes.

Col. STICKLE. That has been my experience.

Mr. FREAR. So it would be far beyond the three-year limit.

Col. STICKLE. If constructed under the ordinary river and harbor methods, I would not stand on that estimate at all.

Mr. STEVENSON. I will next introduce Mr. McArdle, of our Pittsburgh council. This labor question seems to be important, and I think he might have something to add to what has been said.

STATEMENT OF MR. J. P. McARDLE, MEMBER OF THE PITTSBURGH CITY COUNCIL.

Mr. McARDLE. I would say just a word about the attitude of the city of Pittsburgh upon this question. The city of Pittsburgh has not only been a victim of this condition, but it has been the especial victim of the past practices of the railroads, with special reference to the facilities of available properties that might be developed for wharf terminals. When this subject of waterway development became a live one in our district some years ago some public officials foresaw the necessity of the city beginning to prepare for the part it must play in line with making available transfer points, terminals, etc., and in order to help out the city instituted a series of suits to reclaim property that had been in some instances bought in good faith by the railroads from people who had in our judgment no right to give title to them, and in other cases, just to use a common term, were squatters on it; and from that time up until now the city has been engaged in that kind of litigation with a rather marked success. The conclusion has been reached that where it is desired the former occupants will be permitted to continue the use of that property until such time as the city might be called upon to make larger use of it, which it hoped some day would be improved in the development of the water front. The city has further given some thought, perhaps not deeply, to the question of providing these terminals. It went to the extent at least of bringing in an outside engineer who was reputed to be somewhat of an authority upon that subject, to make an investigation, which he did.

The CHAIRMAN. Of what?

Mr. McARDLE. Of the terminal facilities; what should be done to provide adequate terminal facilities, looking to a cooperative movement between the railroads and rivers.

The CHAIRMAN. Such terminals to be owned by the city?

Mr. McARDLE. Of course the city of Pittsburgh did not, and has no thought now, I take it, of investing in terminals, because the city of Pittsburgh, for whatever may be the contributing reasons, has seen its former wharf properties, which were suitable for such industries as Mr. Follansbee refers to as being engaged in by him and other gentlemen now, dwindle away until they are not largely used. But Pittsburgh has a very considerable amount of property under its own

control, which, of course, it is willing at any time to do its reasonable part in converting to the uses wherever these uses are at hand; but I do not think the city of Pittsburgh could justify itself in going into the expenditure of any considerable sum of money, even if it has the authority, which I am not clear it would have at this minute, dependent upon the final development of this waterway. But I have no hesitancy in saying that the city of Pittsburgh would necessarily do whatever proved to be its part in developing these very necessary adjuncts to this proposed improvement, and there is plenty of property there now owned by the city that would be available, I take it.

Now, for one, I regard this particular case as being without parallel in the country. I do not think there is any other section in the country that even remotely approaches this particular territory in this need of added transportation facilities, and we have become convinced that practically the only way to get them and make them serviceable for the needs of this district is through this canal; but while we speak of it as a district, I, for one, do not think of it for a minute as being a project in which the district alone is interested. We have heard references made to what will be the attitude of the western farmer toward this question. To my mind, the western farmer who is dependent upon his coal supply as he was last winter is vitally interested in it, and is interested in it not only from the standpoint of cost, but in a larger way from the standpoint of service, of being able to get shipments over this from time to time, and get it regularly. When we consider it in connection with this war, or consider it in connection with an extraordinarily prosperous peace, we have got to remember that over that short territory represented by this proposed canal route, or, in other words, between the point near the junction of this with the Ohio River and this junction with the Lake Erie Canal, a tremendous percentage of everything that enters into the steel products of the United States passes one way or the other; the coal and coke going in the direction of the Lakes, or to the west, and the ores coming back; and I think Mr. Follansbee will bear me out if I say that in the development of the steel industry in the last 10 years, at least west of the Allegheny Mountains, easily 75 per cent of the tonnage has been developed between the points of this junction here, between Cleveland and Ashtabula on the lake, and the canalized portions of the Monongahela River in West Virginia and Pennsylvania, in the Mahoning and Shenango Valleys of western Pennsylvania and Ohio and along the Monongahela River in Pennsylvania, and along the Allegheny River and along the Ohio River on both sides of the point of junction of this proposed canal.

Now, we know that it is going to be extremely difficult to go into any improvement of this kind upon the proposition of getting labor, but we ought to consider it, it seems to me, in connection with the utilization of the labor, the effect of the present traffic conditions upon the labor power that is now available in the United States. I happen to know that many times during the congested periods of the last year or two coke has been allowed to burn up in the coke plants of western Pennsylvania, to the value of \$25,000 or \$40,000, in a single day, in order that those mines might get the number of cars that they were entitled to based upon their production. That seems to be a tremendous loss of labor as well as of the natural resources,

it seems to me. Whether we have war or whether we have peace, this country must direct its attention a little more forcibly than it has before, and when we add to that the tremendous annual consumption of fuel at the points that would be served by this canal and this tremendous tonnage in following it back and forth, it becomes an item of almost incalculable national value. We can not, of course, go into a project of this kind without some district getting a little more value from it than some other district, but we are going to need, it seems to me, to conserve labor power and the products of labor just as much after this war is ended as we have to do it now. The motive, of course, will be different and the motive will not be as pressing as it is now, because it will not necessarily involve the saving of human lives, but we are going to have to do it if we are going to keep our place in a competitive way in a situation that most of us think will develop.

So far as I have been able to observe the labor conditions, the chances would be just as good, if not better, to get labor to carry on a project like this than it is to carry out the tremendous program that apparently is going to be necessary to keep our railroads in operation. There is not any point that I could think of that parallels this in importance, no matter what way we look at it, in connection with the present war that we are in. We are told every day, and, of course, we know it to be the truth, that the Pittsburgh district—and when we say “district” we do not mean the city limits; we mean the Pittsburgh district—we are told that it is the arsenal of America, and it is practically the arsenal of the allies in a large way. All of this great territory that lies between Cleveland, Ohio, and the river points on these distribution rivers is going to be affected, and anything that we can do to take away from the railroads, whether the war last a year, 2 years, or 5 years, or 10 years, we are going to do it for America and we are not going to do it only for Pittsburgh.

So far as the willingness of the people in the district to bear a part of the expense is concerned, I imagine that they would; but if this problem is of a national character unless it be made a national program and carried out by public funds, I would not see any particular reason why it should not be done as a national problem. But the thing I would fear more than anything else, if Congress saw the wisdom of carrying this out as being a helpful measure, either in the prosecution of this war, on the presumption that it was going to continue for some time, or as a measure that would enable us to more readily and satisfactorily adjust ourselves to the after-war conditions, what I would fear would be the risk of the delays that you gentlemen, as legislators, are quite familiar with, as any of us are, owing to the necessity of getting legislation through a large number of local counties, townships, and burroughs, and holding elections, and running into the limitations which the law places upon such matters; and I would think for the amount involved in it, because while \$75,000,000, \$80,000,000, or \$100,000,000 is a tremendous sum of money, it is only tremendous or important, of course, in its reference to the size of the project to which it is to be assigned; and, if this is as big as we think it is, I think it justifies the Government in taking hold of it, and in taking hold of it as a part of the national traffic—national transportation.

I have not any hesitation in saying that I think that this canal would have been built by this time by other means if it had not been for the opposition of the railroads. We heard some of you gentlemen referring to the matter of propaganda. Well, now, you appreciate, as practical men in legislative affairs, as well as we do, how difficult it would be to have a large number of people in any community, conversant with the details of a project of this size or even of this importance, when you know, as we think we know or most of us do, that there was a concerted propaganda carried on against it by the railroads, and you can see how reasonable it is to expect to find the condition that exists now. But the very people that delayed it were not able to handle the traffic in a crisis in the way that the people and the Government expected of them; and, I think, to-day the people are able to see big things in a big way, and while the people are willing to pay the bill, Pittsburgh would not have any hesitancy in paying its part of a national program of improvement that affected Alabama, Mississippi, or anywhere else, and I believe that the same can be said of the people down there; and I believe that if the thing is taken up by the Government—authorized and looked upon as being an important governmental measure—that there can be enough of labor, enough of equipment, and enough of all kinds of man service directed from unimportant private enterprises to carry out the program—as the engineers indicate it can be carried out—and I hope that you gentlemen will give the bill the most favorable consideration.

Mr. FREAR. Did you run across any opposition on the part of the railways to the development of this canal?

Mr. McARDLE. I would not say that the railroads did as they did a few years ago, when they were advocating an increase in their rates or when they were trying to cultivate public opinion along a number of different lines.

Mr. FREAR. I did not know from the way you spoke but what there was some well-organized movement of the railroads to block the canal project.

Mr. McARDLE. Speaking in that strain, I spoke as a man in public life and in touch with the way things are done; and you quite well know they are not done, in cases of that sort, in a public way.

Mr. FREAR. It encroached upon what they thought was the business that they might have; but, of course, on the Ohio River we have not any opposition from the railways to the development of the river, and I was wondering whether or not you had discovered any railway opposition in the construction of the New York Barge Canal.

Mr. McARDLE. I never have, and I would point out a very good reason for that. Take the Ohio River from Pittsburgh to Cincinnati and there is not any development of a large nature on it after you leave Wheeling, except a limited amount of coal, and it has only gotten into the market again after many years for practical operations. But here is a fixture. The ore mines are up there and they can not be moved, and the coal mines are down here and can never be moved.

The CHAIRMAN. That brings up another question, and it is a very interesting one. What is the purpose of building at Pittsburgh, where the shipment is required of both ore and coal, in preference to

some locality where either one or the other may be at hand and not require double shipments?

Mr. McARDLE. I think, perhaps, a more intelligent answer than I could give could be given by a man of practical experience, such as Mr. Follansbee.

Mr. ENGLISH. The United States Steel Co. attempted to answer that by building at Gary.

Mr. FREAR. They are building at Superior, Wis., at Mobile, at Sparrows Point, and in Chicago, and elsewhere. The question occurs, Why would they build necessarily in Pittsburgh, where double shipments would occur?

Mr. McARDLE. While they may be building and making some extensions, as far as I know they are not building in a large way in the Chicago district.

Mr. FREAR. They have, I understand, an investment of \$25,000,000 at Sparrows Point.

Mr. McARDLE. That is an eastern development. They may get ore from an entirely different point than this. I think they import their ore from Cuba and Chile.

Mr. FREAR. Why, for instance, by way of illustration, taking Cleveland, Superior, and Duluth, where you are shipping the coal or ore to or from one of those points, why would not one of them be selected by the manufacturer in preference to a place where he is obliged to ship both coal and ore?

Mr. McARDLE. I presume that depends, in a sense, on a number of things. It would depend, to some degree, upon the relative number of tons of coal required to develop a ton of ore; and then, of course, another thing which may have operated in the past, and may still operate, is the labor supply.

Mr. FREAR. And I suppose the transportation rates.

Mr. McARDLE. If they took it up to the ore, of course they would have to consider as against that the hauling, the distribution of the thing to the very district from which they took it.

Mr. FREAR. Here is a question that was developed: You spoke about farmers being interested. The question occurs during the discussion of the farmer in Iowa, what his particular interest is in this development, and the suggestion is made that he would be interested because he would get his coal more economically or more speedily, or whatever the proposal may be. How would the farmer be able to be benefited when we have to-day the Ohio River and the Mississippi River able to carry this coal and not one ton is carried to-day, as I understand, from Pittsburgh to St. Louis?

Mr. McARDLE. St. Louis, as I understand the situation, gets its coal supply from a near-by field in Illinois.

Mr. FREAR. Not anthracite.

Mr. McARDLE. No; it does not get the anthracite from there, and I would not imagine that the anthracite, in a comparative way, would amount to very much of the whole consumption.

Mr. FREAR. That is what they are doing in Iowa, where the farmer is not using bituminous fuel for heating purposes. I am trying to ascertain why the Ohio River has not been developed for coal traffic purposes.

Mr. McARDLE. So far as I understand the situation, there is only a limited opportunity for the use of that river for the distribution of coal.

Mr. FREAR. But the coal shipments were far greater before than after the improvements were made on the river.

Mr. McARDLE. That is true.

Mr. FREAR. If that be true, the river is capable of carrying what it did before any improvements were made. The traffic is nowhere near what it was before that.

Mr. McARDLE. But since that time I think you will also find that from the Pittsburgh field they furnish such a large supply that there has been a tremendous increase of shipments to the Lakes and to the Northwest. They have simply diverted the market there.

Mr. FREAR. If it was a commercial proposition of equal necessity, why would not the shipments go down the waterway in preference to sending them by railway?

Mr. McARDLE. Probably the condition did not exist that there was an equal commercial advantage, because when they got into the New Orleans market they were coming in competition with a very considerable number of coal fields that lay between Pittsburgh and the New Orleans market, and, as has been pointed out, when they get into the Alabama district which the Government has helped by the improvement of that river down there. The West Virginia field and a number of small operations along the lower Ohio River between Cincinnati and the Kanawha River and some above that all go into that field or into that market.

Mr. FREAR. What reason would you give why the Government should put in \$65,000,000 on this project when the State of New York put in \$150,000,000 in the development of their barge canal?

Mr. McARDLE. Because this is a connecting link in the transportation, it seems to me, which the Government absolutely controls. It controls the rivers and it controls the Lakes, and this is merely providing a very small link between those two, the use of which, from my point of view, at least, is national in its benefits.

Mr. FREAR. What assurance have you that it would be used?

Mr. McARDLE. I have not any assurance except the conclusion that seems to have been reached by everyone who has studied it, that it is capable of rendering the service to the shipper, and that it would also be an addition to the transportation service which the experience of the past few years has proved to be very much needed.

Mr. FREAR. Is not that the same answer that was given, practically, for building the New York Barge Canal, and the Hennepin Canal, for the improvement of the Mississippi River which has been developed to a 9-foot channel below St. Louis, and in like manner on the Ohio River, and also the barge canal down in Alabama, on the Warrior River, where we spent \$12,000,000 without producing any appreciable commerce?

Mr. McARDLE. It is for the reason that it applied to entirely different conditions; that is, that there is not an opportunity for the use of any of those canals. I would not say any of them; there might be some, but most of them, for the use of them both ways as there is in this case. The ore is going one way constantly, and the coal and coke is going the other way constantly.

STATEMENT OF MR. W. Y. ENGLISH, MEMBER OF PITTSBURGH CITY COUNCIL.

Mr. ENGLISH. Permit me to try to answer the question. I regret that our friends from Pittsburgh have not seen that the chief answer to Mr. Frear's question is that Pittsburgh is the geographical business center of the United States, and you can not get away from it. We are within a night's ride of all of your big cities. No business is going on in Washington, Baltimore, Philadelphia, New York, Chicago, and down to Cincinnati, and so on, that is not reached from Pittsburgh, and it is a matter of business economy and expediency and efficiency, and every other thing that you can think of; that has something that the world uses the most of which can be produced more economically and which no other single locality can supply, and is not that the only distributing center? That is the way it occurs to me.

Mr. FREAR. There was a distinguished individual named Proctor Knott, who once advertised to the whole public in a speech in Congress that Duluth was the center of the universe, and yet that was not determined, although it is the greatest shipping point on the Great Lakes to-day; but the same argument is ordinarily advanced when people come before the committee from New York City, Philadelphia, Baltimore, Norfolk, Mobile, or from other places, and they believe theirs is the great center of the universe, and it is a fine thing for the pride of locality that that is true. But Congress is dealing with all places, and canals and rivers have not been determined to be more profitable under conditions that now exist, notwithstanding promises made in advance that they would be. It was said grain and iron ore was going to be shipped to Chicago over the Hennepin Canal and the products from the Lakes would go back to Iowa, and this scheme was going to be of great help to the western farmers, but we do not get practically anything out of that canal, and that is a condition that confronts us in New York State to-day.

Mr. ENGLISH. Does it match Pittsburgh as being the geographical center?

Mr. FREAR. They said in advance that all the grain that comes east will go to New York City. That is the reason the Erie Canal was first developed, and yet when it comes to use of the canal now we have had no evidence that it will be used commercially unless the Government puts in the barges.

Mr. ENGLISH. We of the city councilmen meet with these inquiries from delegates who desire information from us, only ours are minuter as compared with things that come before Congress. If you will look at the map you will find that the district is the geographical center. How long it is going to be we do not know, but it is now and it has been for some years, and the tonnage of all the other cities combined does not match the tonnage of Pittsburgh, and we would be glad to furnish you some statistics we have gathered in regard to that district. That appeals to me as a big reason.

Another reason has not been touched upon. You are going to hear of the matter of a belt line railway system, now that the Government has control of the railroads. Our city has been troubled by lack of foresight on the part of the privately-owned railroads, as

Mr. Follansbee illustrated with regard to the B. & O. system. They have not a single belt system in that city. They have them in Buffalo and Detroit. Mr. Carnegie made an agreement with the Wabash Co. to come into Pittsburgh, and they built a passenger station that cost a million dollars and had all the transit facilities and built tunnels into the city. It was developed on investigation that the city councilmen were bribed to keep the Wabash out, and they have been kept out, and the United States Steel Corporation managers compelled the Carnegie Steel Co. to back out of the contract which it had made to get the Wabash into Pittsburgh. To-day the railroads run up and down the Ohio River; they can not get away from it, and yet that is the very lesson that is going to help you gentlemen interchange your railroad systems with this proposed waterway. The best illustration is that if you look at our district you will see the Pennsylvania Railroad on one side of the Ohio River, and then on the other side of the river you have the Pittsburgh & Lake Erie Railroad, absolutely paralleling the Ohio River. You have three lines of transportation, one on the left, the Lake Erie, and the Pennsylvania on the right, and another will be this waterway. That same condition exists on the Monongahela River, the B. & O. on one side and the Lake Erie on the other.

Mr. FREAR. The same is true on the Mississippi River, is it not?

Mr. ENGLISH. It indicates that the river was the shortest distance between the two points, and whoever can do the business best and cheapest is going to get the order. That is the whole story.

Mr. STEVENSON. We want to hear now from a man who knows something about the canal. He has been interested in it ever since the project was started. I take pleasure in introducing Mr. Shaw.

STATEMENT OF MR. JOHN E. SHAW, MEMBER OF THE CHAMBER OF COMMERCE OF PITTSBURGH AND MEMBER OF THE PENNSYLVANIA STATE CANAL BOARD.

Mr. SHAW. Mr. Chairman and gentlemen, we have all been submitting cheerfully to privations throughout this country, and we have been volunteering cheerfully to invest our money in bonds of the United States for the purpose of furnishing the boats for carrying on and winning this war. The meat of the question before you, gentlemen, in this bill is, Has this canal project which is before you any claim as a war measure upon that money that has been accumulated and is going to be spent so as to enable this Government with force and vigor and efficiency to win the war?

There are just three points that I want to bring out that will show the Government's interest in the matter. One has been largely elaborated on, namely, its national character, and in fact it is of international character. Now, just referring to the map a minute, it has been pointed out that here is the canal [indicating]. Up there is Duluth, there is the iron ore; here are the coal fields, eastern Ohio and West Virginia, and running down through Tennessee and Kentucky; and here are the greatest steel plants in the country along this valley here and running down the Ohio River to Wheeling. Now, you have heard the statement that 32 States are connected by this canal. The 32 States are situated along the Mississippi and the Ohio

Rivers and the Lakes along here [indicating], which will be connected if you should build this canal and connect it up with the coastwise canals. There will be 32 States that will be directly affected by transportation, with a depth of 12 feet. Anyone who is a student of waterway transportation knows that if there is a sufficient depth of water and it is a modern waterway transportation will seek it.

There has been some discussion about the reason the Ohio River system has not been used and the reason the terminals are not there. Along here [indicating] for about 150 miles it is canalized. The balance of it is not. It would be about the same condition as if we were to build the Pennsylvania Railroad from Pittsburgh to Altoona and stop there; say that the traffic wanted to go between Pittsburgh and New York, but it stopped at Altoona. Would the great terminals of New York, Philadelphia, and Pittsburgh be there to-day if that was the condition? If there is the continuous service of transportation of the character that is needed between the great tonnage-producing centers and populations the business is always there and will go between those points.

Mr. FREAR. May I ask a question on that point? The distance is practically 200 miles on the Ohio, including the canalized river which you have pointed to on the map.

Mr. SHAW. It is about 200 miles.

Mr. FREAR. The average haul, as given by the Army engineers, I think, is only 14 miles on this part of the river. Why is it that it is only 14 miles for the average haul on a 200-mile river stretch?

Mr. SHAW. It is because the tonnage has not been expected to move there. You compare that to the Monongahela, where the coal is at the upper reaches and the consumption at the mouth, and 45 per cent of the entire tonnage will go that way.

Mr. FREAR. A peculiar condition exists on the Monongahela, but the Ohio River is about 1,000 miles in length, and 28 miles is the average haul reported.

Mr. SHAW. Over this 150 or 200 miles [indicating] there has not yet been established a communication of business between those points. It is growing, let me say, down to Wheeling; as was pointed out, the La Belle Steel Works and all these plants are furnishing their own terminals and serving themselves with their own boats, but the main service of a waterway like this would be to put all of these cities upon these waterways. Down here is raised cotton and grain.

Mr. FREAR. But that river is not used.

Mr. SHAW. Suppose they get through here and connect with New York and New England by boat?

Mr. FREAR. They do not even use it to carry freight to St. Paul or St. Louis.

Mr. SHAW. I think that is a problem that has been demonstrated.

Mr. FREAR. That is true. We are interested in it as a problem.

Mr. SHAW. I think the Erie Canal, which the Government has taken hold of and put barges on, will be an object lesson to this country of the practicability of waterways, and if the Ohio River was completed and this canal built and the Government put their own boats on and came all the way down here it would be an object

lesson in waterways that would exceed anything in the world. I would not except the Rhine in Germany nor any of the waterways in France, nor Holland, but our country would be equipped with a waterway that would challenge any part of the world for efficiency.

The CHAIRMAN. Do you regard the Ohio River as a worthy and important improvement which ought to be continued?

Mr. SHAW. I most heartily do, Mr. Chairman.

The CHAIRMAN. Do you approve the expenditures which have already been made on this 9-foot canalization project?

Mr. SHAW. Yes, sir.

The CHAIRMAN. Do you agree that this committee acted wisely in recommending the bill which made an appropriation of \$5,000,000 for the Ohio River as compared with the total amount of \$19,227,900 appropriated?

Mr. SHAW. I approved it entirely.

The CHAIRMAN. What would you think ought to be the attitude of all the Members of the House of Representatives and the Senators from the States of Ohio and Pennsylvania regarding the further improvement of the Ohio River?

Mr. SHAW. I think the entire country would approve of it, not only Pennsylvania and Ohio.

The CHAIRMAN. This is a legislative proposition; you have to have Congress behind you, and you and others have been emphasizing the importance of the Ohio River. If there is opposition to the Ohio River project within the territory there, you think it puts you gentlemen representing 20,000 business men upon inquiry?

Mr. SHAW. I think they ought to be converted. What this country has needed and needs thoroughly is an object lesson in modern waterways. The Ohio River would give us that object lesson. It would accentuate the Ohio River tenfold by coupling it with the inland lake and river system, and if the Government could give us an object lesson by building this canal, I think the Ohio River in three years would be justified as one of the most economic improvements in this country. The exigency of the war is bringing about the condition where things happened on the New York barge canal. You ask why New York expended \$150,000,000 on it. If that canal had stood there during all these years and had not carried a pound of freight, it kept the railroad rate across from the Lakes to the Hudson River low enough to more than pay for that \$150,000,000.

Mr. FREAR. Do you believe that the building of this canal, even though it fails to carry commerce, will be a sufficient answer to the proposition because the railroad rates will be lowered?

Mr. SHAW. No; I think it is an absolute necessity if the canal charges are equal to the railroad rates; the freight will be shipped over it. It will not be a question of competition between the railroads and canals any more; it will be merely a question of a division of the traffic that belongs to each. The ore and the coal will go on the canal at much less than the railroads can carry it, and it will be a greater economy. If we had had that system last winter, there would have been no five days' shutdown by the Fuel Administrator; and we lost enough in Pittsburgh in loss of wages and loss of time to have built that canal several times over.

Mr. FREAR. You do not claim that in the wintertime you are going to run the canal constantly, any more than in the case of the New York Barge Canal?

Mr. SHAW. It will run at least eight months of the year, and traffic can adjust itself to those circumstances. Now, the second point I want to make is as to the necessity of the Government considering this as a war measure. The Government at this point [indicating on map] is building a great armor-plate plant at Charleston, W. Va. What happens on this canal? They bring the ore down to the Government armor-plate plant by water without any delay; they can take their armor plate and carry it up here through this canal to New York Harbor and put it on the vessels without any railroad congestion at all.

Now, in connection with the fact that the Government is putting barges on the Erie Canal, suppose those same barges could come down to the Government plant and get that plate and munitions and carry them clear back to New York, and at the same time those Government barges could go into this great coal field and could carry coal up through the canal and supply all of New England with those Government barges, and suppose they at the same time could bring coal up to the plants the Government is using as munition plants, and do that without a failure in the coal supply, take that all the way to Detroit and Duluth and Buffalo, and other lake points, the Government would get a dividend on those barges serving its own plant at Charleston with ore and serving the other plants with fuel, that would pay a tremendous dividend on their investment as a war measure.

Mr. FREAR. Coming back to the original proposition, that would make this Ohio canal link, according to your understanding, with the New York barge canal?

Mr. SHAW. Absolutely.

Mr. FREAR. Why is there any distinction between the New York barge canal in the matter of construction, so far as the contribution of contiguous communities is concerned? Why should one be built as a State canal and made by the Government a part of its waterway proposition, and the other be built by the Government?

Mr. SHAW. The people of New York realized that the Erie Canal was the foundation stone of their empire State.

Mr. FREAR. I am speaking now about the \$150,000,000 barge canal proposition.

Mr. SHAW. Their faith was so strongly established in it, and the maintenance of the port of New York was so firmly fixed upon that principle that they wanted that canal standing there whether carrying freight or not. They enlarged it until the last time it was the salvation of the city of New York. Now, this project in New York is something like projects in Texas and the Northwest. These waterway improvements are locally for their benefit, and they have contributed part; but here is a project that 32 States are as much interested in almost as we are.

Mr. FREAR. But they are all interested in New York in the same way.

Mr. SHAW. No; not in the same way. Only New York State, and perhaps Michigan and Wisconsin, are affected by that canal, but all

of these States I have referred to are reached by this proposed waterway; they touch upon it, and it is so distinctly national, and with Canada international, in its aspect that it is not fair to ask this little community here to build it. That is more than half of the States in the country, so that it is a distinctly national project. The government needs this, because there would be no congestion in New England of coal, no congestion up there in the Northwest of coal, and there would be no need to hinder the Southern States here [indicating], clear down to the Gulf, from sending their products to any of these States, and it is imperative that this canal be built and maintained as a national waterway.

Suppose the war stops. After the war is over there will be a more severe commercial war than the world has ever known, to build and reconstruct the destruction that has been done by this war. If we are in a position to serve all our internal agricultural districts, all our manufacturing plants and link them up with the Atlantic Ocean here [indicating], and the Gulf of Mexico here, and with the Atlantic Ocean through the St. Lawrence River and the Welland Canal, we will be in a better position in the United States to grasp the commercial opportunity that is coming after the war than any other nation, and it is imperative that we have that system ready when the war is over if you want to be in the race. For that reason I think there should not be a minute lost in the Government assuming this trivial amount as compared to the billions of dollars that are being spent for the purposes of war.

Mr. FREAR. What, Mr. Shaw, did you say it will do? Can you point to a single case where it has been done? We are hoping it will. You are asking us to spend \$65,000,000 or \$90,000,000 or more at a time of war when we are spending \$50,000,000 and when the Secretary of War says confine everything to war purposes. Why do you say it will be done? I don't question the enthusiasm and the purpose.

Mr. SHAW. I think it will be done. It has been done.

Mr. FREAR. Where?

Mr. SHAW. You take Frankfort-on-the-Main. It had two railroads on each side of it. It grew in 20 years after that more than in the previous 250 years. All of the railroads on each side of it were opposing it just as they oppose it in this country, and they found it such a benefit to themselves that they afterwards petitioned the Government to deepen it.

Mr. FREAR. The railroads and the Government there are identical?

Mr. SHAW. They are here in this Government now.

Mr. FREAR. There was a different condition found there entirely. The Government determined where this freight should go.

Mr. SHAW. They do here. The railroads and the Government in this country are one. The Manchester Ship Canal has done the same thing.

Mr. FREAR. The Manchester Ship Canal was built by the city of Manchester, not by England. And it has helped to develop Manchester just as this would help develop Pittsburgh. We all know that, but Manchester built it.

Mr. SHAW. The people around Pittsburgh have got so firmly impressed that this connection of the two great waterway systems will

come with the connection of the canal, and we are working up to that end, but the war coming in and on account of the distributions that are to be made now in taxes and in liberty bonds, and things of that kind, you can't expect the local community to raise the necessary money for a project that is distinctly national. But as the Government is doing these things now with tremendous resources at hand, as a war measure we think this can be linked up largely with the Government's program to win the war.

I thank you, gentlemen.

STATEMENT OF MR. J. SHARP WILSON, OF BEAVER, PA.

Mr. WILSON. I don't intend to talk but a minute. It goes without saying that the people of Beaver County, that county which lies along the Ohio and Beaver Rivers, intersected by the two and divided into three parts, are unanimously in favor of building the canal. But that looks selfish when we are here before the country asking for an appropriation for the building of this waterway, because this canal will run through the county.

We are here boldly to ask that it be built by the Nation, because, as has been so well said by Mr. Shaw, that it is in our minds purely a national enterprise, that we have no hesitancy in asking from the fact it will connect the Ohio and the Mississippi Rivers, the Lakes through the Welland Canal and the St. Lawrence River, and through the Erie Canal, in the State of New York, impresses us with the fact that if it is any advantage to the people of Pittsburgh locally and the immediate district through which it passes, that it necessarily must be of national benefit. If waterways are at all necessary and are useful as a means of transportation, it strikes us overwhelmingly that the building of this canal and connecting these waterways is so overwhelmingly national in its importance that we don't need to discuss it.

There is an element as has been suggested here of the proof of its efficiency in the matter of handling commerce. That has to be demonstrated, but we believe and sincerely believe that as a matter of national policy in the transportation of freight as a matter of national defense and war project it should be fathered by the National Government.

I thank you.

**STATEMENT OF MR. GILBERT F. MEYER, COUNTY COMMISSIONER
OF PITTSBURGH, ALLEGHENY COUNTY, PA.**

Mr. MEYER. Mr. Chairman, Allegheny County, of which I have the honor of being one of the commissioners, has a population of a million and a quarter people, an assessed valuation of a billion and a half dollars, which I understand is a greater population and a greater valuation than either one of some thirty-odd States in the Union. This is only one of the counties and States that will be affected by this great waterway.

Most of the arguments I have heard here to-day has been the argument of competitive rates between railroads and water transportation. I don't believe that is the big question that is before the people

of western Pennsylvania. As a public official and a man engaged personally in manufacturing, it isn't a question in the Pittsburgh district to-day whether we can ship by railroad or water the cheapest, but how can we ship at all, and we are using trains of automobiles, heavy trucks, transporting our traffic over our 500 miles of improved county roads in Allegheny County that one winter alone has cut those roads into ribbons, ruined \$20,000,000 of the invested capital of Allegheny County, because the railroads were not capable of handling that transportation. In the Pittsburgh district we are simply outgrowing ourselves. We have things there in abundance that the world needs and we need things there that the world outside produces, and our transportation facilities are not equal to bring those things into us that the world has to sell to us or to get out to the world the things we have to sell that the world needs.

Take the Monongahela River. I live on the banks of the Monongahela and I know something about it. On both banks of the Monongahela it is paralleled with two main systems of railroads. Practically all of the railroad track it is physically possible to build there. To build any more would be nearly a physical impossibility or a great engineering feat on account of the river being wedged in by the hills. If we had not canalized Monongahela River, if it was not canalized to-day and you had to depend on that railroad transportation, 50 per cent of the munition capacity of Pittsburgh that is supplied for this war would be closed down and standing idle to-day on account of fuel. It would not be possible for the railroads to their utmost capacity to transport 50 per cent of the fuel down along the banks to the great mills of the Pittsburgh district.

Take the Pittsburgh Bessemer Railroad, which is said to be the most profitable railroad in the world. That was built from Pittsburgh to the Lakes purely for the purpose of transporting the ore from the Lakes to Pittsburgh. I have first-hand knowledge of something that is going on there to-day. The officials of that railroad are before the county commissioners asking permission to change the county roads and in some places build as much as 16 tracks abreast across our county roads at three different points, making a tunnel under those railroads of 600 feet in length, which they propose to arch and put down sidewalks and light by electric lights and all these things.

We have been to Harrisburg before the public utilities commission in regard to the question. They have found it necessary to build parallel lines 5 miles out of Pittsburgh to accommodate industries that will cost \$5,000,000, and in many places making cuts through the hills and over the ridges of 130 feet in depth, and in other places making tunnels for great distances, and they are building that great tunnel at Pittsburgh to try to take care of this traffic, which is said to be impossible.

We are trying to build a county road up the Monongahela. On one side is the Erie System and the other side is the Pennsylvania System. They have intrenched on our roads. We are trying to find a place to put our road. Every one of those railroads say to us: "We can not afford to give an inch of this ground. Our terminal facilities are too valuable. It is not a question of price." That is the situation in Pittsburgh. We need an outlet; we must have an outlet.

If we are going to give the world the things we can produce there better than any other place in the other we must have means to get it out to them, and we must have means to get into us the things we need to produce it.

As has been said, it is not local. If we can supply the world with things they need better than any other community, are we not right?

Mr. FREAR. You spoke of it being recognized as a national proposition. Don't you think the local interests should bear a portion of the expense? There are a great many multimillionaires there. What do you think about this?

Mr. MEYER. My experience has been the more wealthy any city grows the greater its tax burdens.

Mr. FREAR. Are your roads constructed entirely by the State or by local contributions?

Mr. MEYER. Ninety-five per cent of the \$20,000,000 in Allegheny County have been built by Allegheny County.

Mr. FREAR. Allegheny County wouldn't come to the Government, of course, or wouldn't go to the State and say, "You build the roads here; we are going to have some special advantages for our local community"?

Mr. MEYER. No, sir. We are fast coming to the point when the United States Government is using our roads to bring their truck trains from Michigan to the seaboard and cutting our roads up; we are fast coming to the point that we think the National Government ought to contribute to those roads.

Mr. FREAR. I don't know but what you are right in that, but if the National Government is not using them, is not using this waterway to any great extent but is to contribute the entire amount of \$65,000,000 whereas Pittsburgh is a locality that will be especially benefitted at this time, what would be said? Of course, it has been spoken of that this will be a national enterprise. For instance, as suggested the trucks that were used for carrying coal this last winter, I don't know whether you are aware of the fact or not, but on the upper Mississippi on which we have put thus far \$50,000,000, the average water haul is about 14 miles, and with three or four trucks they could have hauled all of the actual freight traffic there last year. We are confronted with that condition all over the country, on the inland-water projects that have been improved. The question is, Why should we continue new projects unless the Government benefits from it?

Mr. MEYER. I mean to say that the more Pittsburgh and every great community grows the greater is its tax burden. To-day the county commissioners are asked to come inside of the borough of Emsworth, a borough that links with Pittsburgh, over which these truck trains pass, for about a mile long, and aid that community. The commissioners were up to see us this week, saying that the trucks have used this road and cut the roads to pieces. Emsworth borough has not another dollar. They have no bonding power. They have voted up to their limit. They say to us that, "You, as the county commissioners will have to come in here and exercise the right that the law gives you, although it has not been availed of, and improve this road inside the borough limits." You will find that all over, the majority of the boroughs are bonded up to their

limit. If you wait to get your legislation changed, or wait to such time as conditions would permit your bond issue, the proposition would never be done.

Mr. FREAR. That was a very recent proposition wasn't it?

Mr. MEYER. Yes; but a very foolish one.

Mr. FREAR. We had been assured on the floor of the House recently that Pittsburgh and local communities were going to build this canal. That was what Mr. Barchfield, from Pittsburgh, stated in debate, and I supposed they were going to do it.

Mr. MEYER. We intended to do it this year if the war hadn't come. A great number of these boroughs are bonded to their limit and it would not be fair to ask a community that did have bonding power to pay its share and any borough that didn't have a bonding power to go free.

Mr. FREAR. That is this way in the State of Connecticut, where they have a bonding power. The State legislature passes an act. Various communities in the western states make levys by districts which may include several counties, or the State itself makes its contribution to the waterway highway, or like the Government in the highways it builds.

Mr. STEVENSON. Will you permit me to thank you on behalf of this delegation for the courtesies you have extended us to-day. We have three or four other gentlemen here but we feel like we have trespassed on your time too much already.

Mr. FREAR. Well, you gentlemen have come here to make your record, and it is being taken down. While we would like to conclude, yet I think it is nothing but right and proper, and I prefer that we hear them if you have any additional facts to present, or any others whom you wish to have heard.

Mr. STEVENSON. Very well, then, we will hear from Mr. James Norton, of the Iron City Central Trades Council.

**STATEMENT OF MR. JAMES NORTON, OF THE IRON CITY CENTRAL
TRADES COUNCIL, OF PITTSBURGH, PA.**

Mr. NORTON. I am not going to take up much of your time. I am going to answer one or two question I heard you ask. The first one was with regard to the coal production of Pennsylvania. I know for a positive fact that in Allegheny County alone this winter there were 20,000 miners that didn't work over two days a week on account of not having the facilities to move the coal.

Mr. FREAR. Do the miners determine that question or the men who own the mines? Why couldn't these men continue the mines and allow the coal to be stored, even though it was not hauled away at the time? Would not that be done if the Government took control of the mines? Should the mine owner be permitted to say, we will allow you to work two days in the week only?

Mr. NORTON. That would be almost impossible along the river where they have the rail connections and river connection. Those two days they do work they are loaded on the barges, but they had no cars to load. There wouldn't be any place where they could store that unless they had the cars to load it into and unload it.

Mr. FREAR. In other words, the Government becomes the warehouse owner and furnishes the storage as well as the means of carriage?

Mr. NORTON. Yes, sir.

Mr. FREAR. Ought that condition to be permitted?

Mr. NORTON. I don't know, but that just goes to show that all this labor could have been used some other way.

Mr. FREAR. Ought to have been used for producing more coal, if they had proper facilities for storing? The companies should provide such facilities and not the Government.

Mr. NORTON. Or, if we had something on this order to remove this coal up to the Lake ports where it could have been stored, those mines wouldn't have been idle in here in this section, because the coal could have been removed.

Mr. FREAR. Couldn't the coal have been removed to St. Louis and other cities?

Mr. NORTON. That is a question. We used to haul coal down to Memphis and those ports. Eighteen years ago I went down to what is called the Marion. We hauled hundreds and hundreds of tons of coal down to Memphis and New Orleans. That coal country wasn't developed at that time. Since that time they have got these little roads in Tennessee and Kentucky developed, and they can haul that coal lots cheaper than we can haul it down by river, and here is what I am getting at: We have no way of getting to this market, only by one or two or three railroads, and here is all of our market up to the north of us.

Also, the labor on this canal proposition. In Allegheny County three weeks ago the Austin Contracting Co. applied to the Pennsylvania Department of Labor and Industry, Bureau of Employment, for labor at 40 cents an hour, for as many hours as you wished to work, and get paid every day. I think they asked for 100. There were 450 men applied Monday and Tuesday morning for a job advertised in Saturday evening and Sunday.

Mr. FREAR. What kind of job was that?

Mr. NORTON. Unskilled labor. Forty cents an hour. You could work 12 hours. This is work to be done by unskilled labor, practically all of it. You won't need skilled labor on that except a few dinky runners and steam-shovel runners, and I absolutely feel there will be enough labor in this community to put that through.

Mr. FREAR. At \$4.50 a day?

Mr. NORTON. It may be \$5 a day before we get through.

Mr. FREAR. May I ask Col. Stickle on what basis do you estimate the pay of unskilled labor in making estimates for this canal?

Col. STICKLE. I didn't estimate that.

Mr. NORTON. That just goes to show that there must be a great quantity of unskilled labor in this district if they answered that advertisement in 24 hours.

Mr. FREAR. At a time like this, when we are trying to raise all the money we can to take care of our troops abroad and Congress is asking every person throughout the country to give all the money that can be spared for this war and sacrifice, would you believe it wise for the Government to pay \$4.50 a day for unskilled labor to develop this canal at this time?

Mr. NORTON. Certainly, if we are going to get this production here over across the water in one-half the time, I would say certainly.

Mr. FREAR. But do you expect to get it over there before the war is over? You have heard the testimony here of the colonel that it will take practically three years?

Mr. NORTON. Even so. I hope this war don't last 60 days more, but we don't know, and none of us know but what this war might last 10 years, and if we could have this thing finished I think that \$4 a day, or whatever it would cost, would be very well spent.

Mr. FREAR. You would have to meet the criticism of the people who would question whether or not that was the best way of spending public money when we have thousands of avenues in which to spend it now, and they are the people who pay the money?

Mr. NORTON. That is true. There isn't any question of the shortage of unskilled labor in this district, and the reason for that is that they are coming to Pittsburgh and drawing these men away to seaport towns, giving them eight hours a day and good wages. That is not what we are doing with the unskilled labor in Pittsburgh.

Mr. FREAR. That is the experience in the factories along the Delaware River. Of course it is demoralizing the labor conditions in this war.

Mr. NORTON. Yes, sir.

STATEMENT OF MR. J. E. KANE, OF PITTSBURGH, PA.

Mr. KANE. I represent the real estate board in Pittsburgh. This matter has been under consideration there in recent years, and only recently the board acted on it and asked me to accompany this delegation and say, after serious and careful consideration, they were for it. They regard it at this time as a national project, and I hope the Rivers and Harbors Committee would favorably report on this bill to appropriate the money for it. The chairman has said there that there was a duty upon us to educate the people to the necessity of this. I believe the people generally throughout the country look at the Congress of the United States as probably the best brains in this country, and we look to them to take the leadership in national movements of this kind.

Mr. FREAR. The Secretary of War wrote me a personal letter, which I introduced in the record, saying it had the approval of the President, that no waterway project should be put through at this time except it was a war project. Do you regard this as a war project?

Mr. CAMPBELL. Pardon me, Mr. Frear. I haven't taken this matter up with the Secretary of War to show him it is a war project yet. I don't think you ought to ask him that question at this time.

Mr. STEVENSON. If you take the war material and ship by way of Pittsburgh through this route to New York Harbor in seven days and have a terminal there because you use boats, it will certainly be a war measure.

Mr. FREAR. That is, if the war is to last a large number of years.

Mr. KANE. I know; but our country is going on that expectation.

Mr. FREAR. But the question is, Are the President and the Secretary of War going on that theory?

Mr. KANE. The people are going on it. We have just gotten through with the liberty loan, and they tell us we are going to have another one, and another one, from time after time. This country is preparing for a long war. Lack of preparation has cost this country a great deal of money and will cost it a great many lives.

Mr. FREAR. Do you believe at this time, when we are spending \$50,000,000,000 within the next two years on the war, that it is wise to put over \$60,000,000 in this canal as a war measure?

Mr. KANE. I certainly do.

Mr. FREAR. Without any contribution from your people up there?

Mr. KANE. Yes, sir.

Mr. FREAR. And the people who have a billion and one-half dollars, living in Pittsburgh, the richest community in the world, are the direct beneficiaries.

Mr. KANE. We are going to pay our proportion of this tax, but this is a national project. Why would we pay any other national project any more than anybody else would?

Mr. FREAR. It is for the salvation of your property that we are paying great war expenses; all of us are. If you don't win the war, your property may not be worth anything.

Mr. KANE. Who is going to pay for this \$250,000,000 worth of freight cars?

Mr. FREAR. We all will.

Mr. KANE. This is a contribution exactly. We will not get any benefit. We are going to pay \$250,000,000 for freight cars. The railroads will never pay for that. Here is a relief for \$65,000,000.

Mr. FREAR. You are not going to pay for the 200,000 cars.

Mr. KANE. Who is going to pay for that?

Mr. FREAR. The people who pay the freight. That is an acknowledged axiom of economics.

Mr. KANE. Why would you ask us as a district to make a contribution to buy these freight cars any more than you would ask us to make a contribution to this as a war measure?

Mr. FREAR. For the reason that many other communities do do this, and the Rivers and Harbors Committee have made that a condition to such improvements and you do pay your proportion for public-road improvements to-day.

Mr. KANE. I think the war situation changes that.

The CHAIRMAN. It is evident anything else to be presented would be merely cumulative. We have been very glad to have you gentlemen here, and you have certainly presented your cause I think intelligently.

I might appropriately add this at the conclusion of the hearing: You gentlemen have left your business and come here at some sacrifice, and you are entitled to know something about this proposition. What you want is success. I am speaking about it from your viewpoint. Just as an individual member of the committee I will submit these comments. It seems to be a meritorious project. It is located in a territory densely populated, with large productive capacity and a large consumer of raw products.

You have stated that there is congestion of traffic and a need for increased instrumentalities to move it. If this waterway connecting Lake Erie and the Ohio River could be assured of full use a very

strong argument on its merits would be presented. You had queries presented to you by members of the committee illustrating that there were canals in the country and natural waterways which have been improved upon which the commerce has not developed commensurate with the expenditures. No matter what brought that about, it is a condition that exists in the minds of the people of the country who have deduced from it the conclusion that it is not advisable for the Federal Government to construct canals or to further improve interior waterways. Whether that was brought about by the railroads who had paralleled these waterways and reduced traffic rates to such an extent that the operation of water carriers is not profitable, or whether in other ways, they had by their action caused the abandonment of water transportation lines—whether it was due to the fact of inertness of people in not providing steamboat lines and terminals and patronizing steamboat lines, the fact is that these interior waterways, some of these canals, have not been used.

As an individual Member of the House, if I were convinced that this waterway would be used, I would be in favor of it. That is only the expression of one Member of the House.

It is very attractive for some other reasons. You have referred, and properly referred, to the fact that it is a connecting link between the traffic of the Great Lakes, with magnificent commerce, domestic commerce of any country in the world, and also would give you a connection through the New York system of canals with the Atlantic seaboard, and further, by way of the Ohio, after it is completed, and the Mississippi River, with most of the great Mississippi Valley. Those are very attractive prospects.

You are only at the threshold of this matter. I have been in Congress 18 years. I have been hearing about this project at least 15 years of that time, and you are now right where you started. We thought when we passed this act in 1906 incorporating this Lake Erie & Ohio River Canal something would result from that. It has not resulted. It isn't pertinent at this moment to go into the reasons for inaction, but nothing has been accomplished.

You now, as a result of it all, come to Congress and say that it is a war measure and it is an emergency which ought to secure the favorable approval of Congress, and in adopting it the entire cost should be appropriated in one sum. If I were a citizen in that section as you are, and I believed in it as you apparently do, I would continue this propaganda simply because a man can always afford to stand persistently by what has merit and public necessity and will confer public benefit. But your troubles are just beginning now. You have to convince this committee as representatives of the House that initiates all appropriation bills, and you have to convince the House, and you have to convince the Senate; and, as I said before, the entire Congress—both bodies—simply reflect public sentiment. I have said something about the two States which are intersected by this waterway, simply held those out as an object lesson, and ask you if the people of those two States unitedly were for this as voiced by them through their Representatives and Senators in Congress. You have also got to take into consideration the whole country. At this period I think there is a distinct trend toward the utilization of our waterways. How widespread it is, how much it has taken hold of

the public mind and public conscience, I don't know. I believe in waterways. I believe we have been very foolish in not utilizing them. The fact is presented as Mr. Frear said. Delegations have come to Congress here asking for the adoption of certain projects, have described the amount of traffic available, and have said the waterways would be used. A good many of them haven't been used.

Let us hope, as you gentlemen seem to believe and as I believe, with the completion of the New York system of canals and the cooperation of the Federal Government in this time of stress in contributing barges and those boats and supervising them that great commerce will be built up on that system of canals. If that shall be done, all of us admit it will be a fine object lesson and would help to remove from the public mind this prejudice created by the illustration of the Illinois-Mississippi Canal, commonly known as the Hennepin Canal, and other object lessons.

I didn't wish you to leave here with the thought, even though you have made a most impressive presentation of this project, that you had made any substantial progress. But if you have persistence, as I think you have, and if your persistence shall be reflected by Representatives and Senators in Congress, and if you can demonstrate that this waterway will develop the traffic which you say it will, it is only a question of time, and, as I hope, a short time, when you will make the necessary impression.

Mr. FREAR. In view of the chairman's expression of his own feeling in regard to the matter, I believe it is very proper that the only remaining member of the committee who is now present at the hearing at this time—in fact, the only remaining Member of the House present at this session at this time, excepting Mr. Campbell, although we have had several others present—ought possibly to state what he thinks is the controlling situation. This is without criticism of the chairman's statement.

The committee as a whole is indorsing quite strongly the position of the chairman in endeavoring to develop terminals on the waterways and canals before the Government spends any more money on new projects, and that is due to the Government's desire to test out the utilization of the streams, etc., improved, which can be done. We are confronted with a very serious situation to-day that has been developed in the questioning—that we are in war. We are using every governmental and private agency to raise funds for that war. The Secretary of War with the indorsement of the President, asks the committee to confine its efforts to war measures at this time, and we are endeavoring to do so, and unless something more is developed than has been presented here I fail to see how you can say this is a war measure any more than the condition at Mobile and scores of projects which are claimed to be war measures, and the harbors at other ports of the country that are claimed to be war measures. It is in argument here at this time that indirectly it may be shown this canal may have some effect on the war. You gentlemen have come a long way as representatives of your community, and I feel it is due you for us to be here. I don't speak in opposition to this proposition. I feel delay, any delay in inland waterways until canals or rivers can be developed to show that the money spent by the Government is well invested, is desirable, and that it would be

unwise to put any more money into new canal projects until that has been done.

Another thing, New York State has placed \$150,000,000 of its own money in its canal system, which would be a connecting link with this proposed canal, and many other communities throughout the country are making their contributions toward waterway improvements. It would seem that your community ought not to set back and say, "We expect the Government to do this without local contributions." If you come before Congress showing your own confidence in the proposition saying, "We are willing to contribute our own money," you will then carry conviction to the four hundred and odd members to whom it will be brought that it is a worthy proposition.

I am glad that you came and the record is made of the arguments that you have presented.

(Thereupon, at 3 o'clock p. m., the committee adjourned.)

APPENDIX A.

LAKE ERIE & OHIO RIVER CANAL ASSOCIATION,

Pittsburgh, May 15, 1918.

Hon. JOHN H. SMALL,

Chairman Rivers and Harbors Committee,

Washington, D. C.

DEAR SIR: On behalf of the Lake Erie & Ohio River Canal Association I desire to thank you most heartily for the full hearing and most courteous treatment you accorded the delegation of public officials and representatives of business and workmen's organizations having a united membership of 170,000 who appeared before the Rivers and Harbors Committee on May 9 in advocacy of House of Representatives bill No. 9927, providing for the immediate construction by the Government as a war measure of the Lake Erie & Ohio River Canal. Your attitude was thoroughly appreciated and warmly commended by every member of the delegation.

As there were some important questions raised concerning which I had special knowledge by reason of my long and intimate connection with the canal project, extending over a period of 25 years, I am venturing to ask your indulgence in trying to answer them satisfactorily.

You remarked that if we could prove that the canal would be used you would favor its immediate construction. Of course, nothing dependent on future events can be absolutely proved in advance, but it is possible to submit evidence of accomplished facts which tend to strongly insure a certain conclusion. I am therefore firmly of the opinion that the traffic which has actually passed through the Sault Ste. Marie Canals and the canalized Monongahela River during the last third of a century most clearly indicates that a tremendous traffic would soon pass through the Lake Erie & Ohio River Canal.

The traffic on the "Soo" canals in 1882 was in round numbers 2,000,000 tons. In 1892 it was 11,000,000 tons, in 1902 36,000,000 tons, in 1912 72,000,000 tons. For 1913 the exact figures were 79,718,344 tons. In 1916 and 1917 the traffic was about 91,000,000 and 90,000,000 tons, respectively, I believe. About 80 per cent of the traffic through the "Soo" canals has been coal and iron ore. By far the greater part of this coal and iron ore goes from or comes to the district which will be served by the Lake Erie & Ohio River Canal. In 1913 there were 30,000,000 tons of iron ore brought into the district from the "Soo" canals and 27,000,000 tons of coal taken from the district and shipped on the Lakes. In 1916 there were 64,000,000 tons of iron ore shipped through the "Soo" canals, which was 15,000,000 tons more than the record made in 1913. The coal shipments through the canals were, however, only 24,000,000, or 3,000,000 tons less than the record made in 1913, although to conform with the iron ore increase they should have been 30,000,000. The falling off was due entirely to the failure of the railroads to furnish cars to the coal mines, and thus was

occasioned the great coal famine in the Northwest last fall which required the use of 50 per cent of the freight cars of about 47 railroads to relieve, thereby upsetting the entire transportation system of the country. This would not have happened had the Lake Erie & Ohio River Canal been in existence. Neither would many furnaces required to make war munitions have been idle. For the 9,000,000 tons of iron ore which they needed and which was lying at Lake Erie ports would have been brought to them by the canal.

In 1916 it will be seen that there were actually 9,000,000 tons of iron ore and 6,000,000 tons of coal which the railroads could not and did not transport, but which the canal could easily have carried. This alone would have meant 15,000,000 tons for the canal. But with its much lower rate and quicker transport there can be no doubt that it would also have secured a fair share of the more than 60,000,000 tons of iron ore and coal which the railroads in 1916 transported through the canal district. If the canal got only one-sixth of this, or 10,000,000 tons, its traffic from iron ore and coal alone would have been in 1916, 25,000,000 tons. But this is by no means all the business it could have had, for the traffic on the Great Lakes in 1916 was about 130,000,000 tons, or 40,000,000 more than on the "Soo" canals, and a considerable portion of this extra tonnage originated in or came to the canal district. The growth of the traffic on the canalized Monongahela River in the last few years and its certain great expansion in the next five years, as shown in the argument presented to your committee by Mr. William H. Stevenson also clearly indicates the probable use of the Lake Erie and Ohio River Canal.

Dr. J. T. Holdsworth, dean of economics of the University of Pittsburgh, after an exhaustive examination, reported that the bulky tonnage moved between the Ohio River and Lake Erie ports and shipped to and from the latter into or from the canal territory in 1913 was 116,778,000 tons. Of this he calculated 86,778,000 tons would be of a character that could advantageously use the canal.

Past experience has shown that the tonnage between the Ohio River and Lake Erie about doubles every 10 years. As you know, this means that the railroads will each year be in a worse position. The canal handling 38,000,000 tons with single locks and 76,000,000 tons with double locks offers the only possible solution of the trouble. If the canal only secured one-half of the probable tonnage increase in the next 10 years in this district and got none of the traffic now carried by the railroads, it would still be worked to its full capacity, and in the saving in tolls alone would in five years pay its full cost.

The opening of the New York Barge Canal will mean also considerable more traffic for the Lake Erie & Ohio River Canal for it will enable tonnage originating in or coming to the district served by the latter canal to be transported between it and New York and New England as well as all other North Atlantic ports. The great industries sure to rise on the banks of the canal as they have on those of the canalized Monongahela, will also supply it with many millions of tonnage.

Objection was made at the hearing before your committee to the citation of the "Soo" canals success as an argument for the Lake Erie & Ohio River Canal on the ground that the vessels carried through the former were much larger and that no transfer of cargo was required from them. This objection was, however, not well founded on facts. In the first place all of the iron ore and of the coal transported through the canal district and which passes through the "Soo" canals has to be transferred at Lake Erie ports to or from railroad cars. This is done at a cost of about 8 cents per ton. All experts agree that the transfer from the big lake vessels to the canal barges could be made as quickly and as cheaply, and probably more so, than is now the case in transferring from vessels to railroad cars, and vice versa. But after the transfer is made to the canal barges then the iron ore and coal would be transported by canal for one-half to one-third the rate charged by the railroads. But experts also say that self-propelled boats or barges, with a capacity of 3,000 tons or more, can be constructed to ply on the Lake Erie & Ohio River Canal, the Ohio River, Lake Erie, and the other Great Lakes. These could, of course, also traverse the "Soo" canals. No transfer of cargo would be required at lake ports and the charge for transfer thus saved would give the canal a still further advantage over the railroads. But an examination of the records for the "Soo" canals shows that the average tonnage of vessels passing through them was as follows: In 1882, 500 tons; in 1890, about 800 tons; in 1900, about 1,000 tons; in the latter year these vessels carried 23,000,000 tons through the canals; in 1907, when 58,000,000 tons were carried through the "Soo" canal, the average tonnage of the vessels was about 2,200 tons; and I doubt if the average tonnage

now exceeds 3,000 tons. Of course, I understand that there are many vessels on the Lakes having a tonnage four times as great as this; but there are also a multitude having a less tonnage than 3,000 tons; and, as I have said, vessels of the latter size can ply on our proposed canal.

Another question asked was, Why did not the canal company, chartered by the National and State authorities in 1905, build the canal? The company in 1905 and 1906 expended \$60,000 to get exact surveys and expert reports. It had its prospectus ready when the panic of 1907 struck the country and, as you know, halted all great and small undertakings. Nevertheless the matter was presented to leading financiers who all agreed that the project was a good one and would pay well, but that the existing financial crisis for one thing prevented its being capitalized, and the growing demand for public ownership of public utilities presented another insuperable objection. For it was said that no sooner would the canal be placed in operation and begin to pay than either the States or the National Government would step in and take it over, and there would be no permanent investment for the capitalists furnishing the money to build it. Impressed with these views the friends of the canal formed the canal association, a public body, the object of which was to have it built by bonds issued by the counties and States immediately interested with some incidental help from the Nation. This plan was carried out with the result that all necessary legislation was obtained in Pennsylvania, Ohio, and West Virginia. A commission or board was appointed of citizens of these States, and Pennsylvania appropriated about \$175,000 for necessary preliminary work. The canal board made its report last June. It was planned to submit the question of issuing bonds to the people of the various counties this fall and next spring. But the war came and upset all the plans of the friends of the canal, just as it did those of the railroad managers. First, it precluded the financing of the canal without the permission of the Government, even though the people of the counties and States voted the bonds. Then the preoccupation of the voters in the war would have precluded making the necessary campaign for the bonds in the many counties involved.

Finally, the immediate need for the canal as a war measure rendered its construction by the Government imperative. For under the old plan it was calculated that it would take a couple of years to conduct the county bond elections, then five years more would have been required for construction and legal delays. But if the Government takes over the matter the canal can be put in operation in two and one-half years, as Lieut. Col. Stickle showed.

It was asked if New York expended \$150,000,000 to build her barge canal, why should not Pennsylvania, Ohio, and West Virginia build the Lake Erie & Ohio River Canal? The answer to the last question partially answers this. Further than that the New York canal was conceived in times of peace with no thought of its use for national purposes in time of war. As its chief engineer recently stated when the people of New York voted the money for the canal they had no idea that its first use last fall would be to transport over it submarine chasers from Lake Ontario to New York Harbor. That canal also lies entirely in one State. Boats traversing it can at most reach about one-half as many States as boats which will traverse the Lake Erie & Ohio River Canal. The latter will also serve the greatest munitions of war industries in the Nation, while the New York Canal will not do this. That canal will not touch the great Ohio and Mississippi Valleys as will ours.

The States of Pennsylvania, Ohio, West Virginia, New York, Indiana, Illinois, Wisconsin, Michigan, Minnesota, Kentucky, and Tennessee, which will derive special benefits from this canal, will pay the greater portion of the special war taxes and raise by far the most of the liberty-bond money which is to be applied to war expenditures. In addition to these 11 States there are 21 others which can be reached by interior waterways because of the construction of this canal, including Massachusetts, Virginia, and North Carolina, and whose people will contribute largely to the war taxes and bonds. Now, if as much as \$2,000,000,000 of the money thus raised can be used to improve the transportation by railroad because of the war needs of the country we can not conceive why one-twentieth of that amount could not be applied to the doubling of the transportation relief of the country by building this canal. Pennsylvania, Ohio, and West Virginia people do not object to the Government using money contributed by them to better a railroad in New England or Texas or California. Why should the people of those States object to the Government bettering its transportation facilities in Ohio and Pennsylvania by water?

Again it was asked, What good will the canal be to the people of Iowa or Wisconsin, particularly the farmers? Well, the canal will release many thousands of railroad cars which can be used to transport the products of the farmers of Iowa and Wisconsin and other States. It will also have the effect of cheapening the rates on the railroads for farm products. As far as Wisconsin is concerned also, its ports on the Great Lakes will be served by this canal.

Another question was, Why is not coal now being sent down the Ohio River and up the Mississippi to St. Louis? Simply because there are a score or more of dams still unfinished on the Ohio. When they are completed coal will be so sent. In addition, St. Louis is getting its coal from Illinois and other much nearer points than Pittsburgh cheaper now than she can get it by river while navigation is so uncertain.

As to the question of canal terminals, they will be provided when the canal is assured, and at the cost of the people of Pennsylvania and Ohio. The people of New York are providing terminals for their canal, but they did not move in the matter until the completion of the canal was assured. The large corporations using the canalized Monongahela are providing, or have already provided, their terminals. So are those on the upper Ohio, where navigation has been made permanent.

The selection of Neville Island within the last few days as the site for a great Government ordnance plant affords another strong reason for building our canal. In January 24 of the 57 furnaces of the Carnegie Steel Co. were idle for lack of coal, iron ore, and coke, which they could have gotten, if there had been proper transportation. Other great industries were also shut down. All these were manufacturing war material. At the same time 418 vessels loaded with supplies for our troops were lying in New York Harbor, unable to move for lack of coal, which our canal and the New York Canal together, if opened last year, could have supplied. The new Government plant at Neville Island will need our canal. So, also, will the great Government plant at Charleston, W. Va. No such plants are on the New York Barge Canal, and this differentiates ours from that again in this respect. Our canal will, however, enable both these plants to use the New York Canal for the movement to the ocean of their manufactured material.

I must beg your pardon for having written at such length, but I felt that numerous questions asked, as above, should be answered more fully than they were at the hearing. Also, I regard this canal as vitally necessary for the expediting of the winning of this war, and enabling this country to hold its own in the commercial conflict to follow peace.

In conclusion I would say that we are already acting on your valuable suggestions to educate Congress and the people on the subject of this canal and to bring it before the Council of National Defense at an early day.

Again thanking you for your courtesy, I am,

Yours, very truly,

BURD S. PATTERSON,
Secretary Lake Erie & Ohio River Canal Association,
1002 Hartje Building, Pittsburgh, Pa.

APPENDIX B.

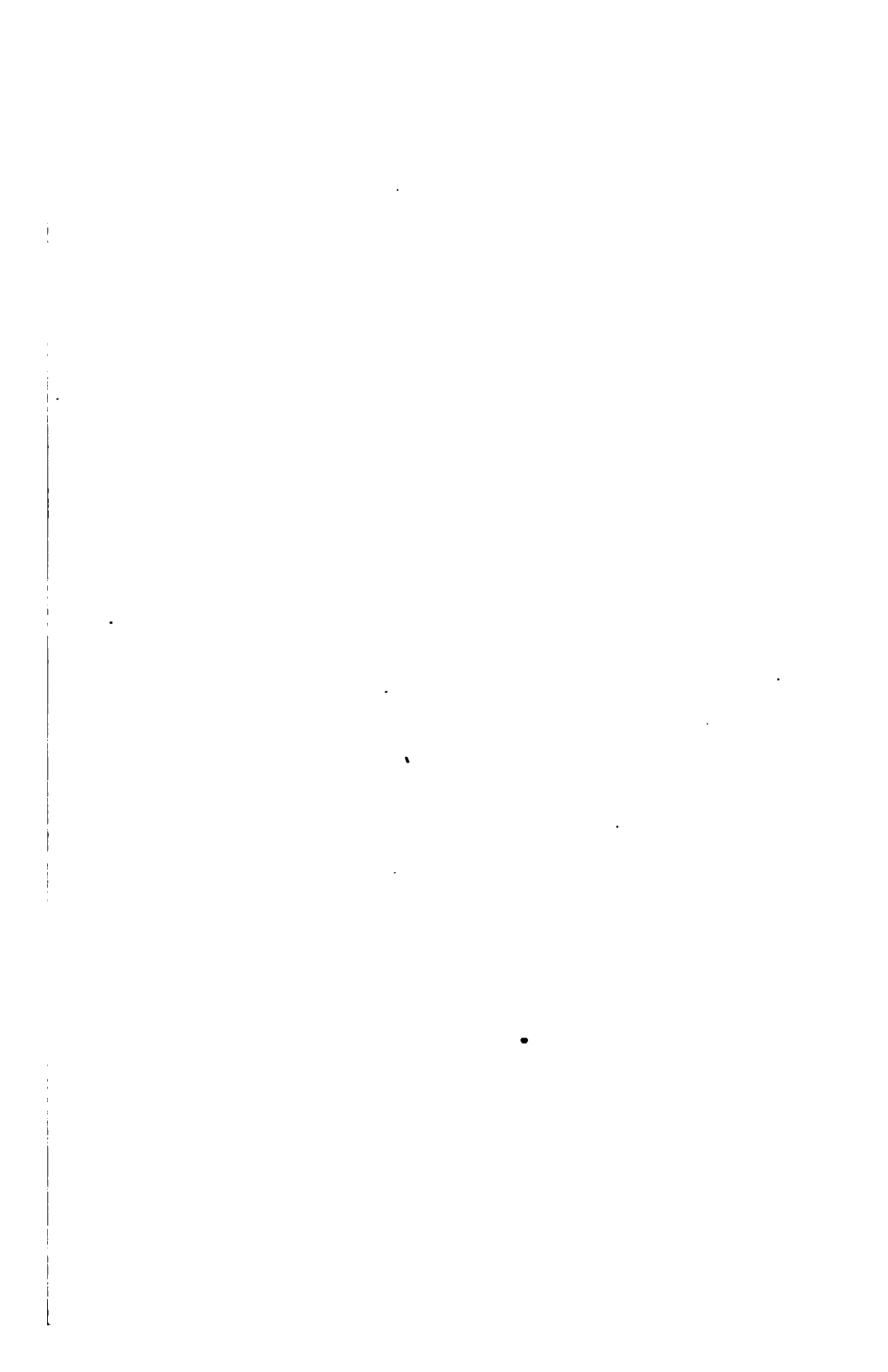
COLUMBUS, OHIO, May 7, 1918.

HON. JOHN H. SMALL,
Washington, D. C.

MY DEAR SIR: I take the liberty of writing to say that the people of Ohio are greatly interested in the bill, now pending before the committee of which you are chairman, to construct the Lake Erie & Ohio River Canal. I will not take up your time in presenting the arguments in its favor, as well informed persons will appear before the committee for that purpose, and because the many benefits to be derived from the building of such canal are too obvious to need especial mention. I only wish to impress upon you the great anxiety on the part of the people of the State that this legislation should go through promptly.

Sincerely,

JAMES E. CAMPBELL.



10

CANAL ACROSS FLORIDA

HEARINGS

ON THE SUBJECT
OF THE

CONSTRUCTION OF A CANAL FROM CUMBERLAND SOUND,
GA. AND FLA., TO THE GULF OF MEXICO

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.
WILLIAM E. CLEARY, New York.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

SAMUEL S. MANN, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

SEPTEMBER 6, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918



CANAL ACROSS FLORIDA.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Friday, September 6, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

In addition to the members of the committee, the following gentlemen were present:

Hon. Hugh M. Dorsey, governor of Georgia, chairman of Georgia Council of Defense, and chairman Georgia Legislative Commission, Atlanta, Ga.

Mr. Charles Hall Davis, Petersburg, Va., representing the Board of Trade of St. Marys, Ga.

Hon. S. G. McLendon, Atlanta, Ga., representing Georgia State Council of Defense (formerly president of the Georgia Railroad Commission).

Hon. W. T. Anderson, Macon, Ga., chairman executive committee, Mississippi, Gulf, & Atlantic Canal Association, and member of the Georgia Council of Defense Committee.

Hon. Clayton R. Ricker, St. Marys, Ga., member executive committee of the Mississippi, Gulf & Atlantic Canal Association, and member of the special committee of the Georgia Council of Defense, and delegate of the St. Marys Board of Trade.

Hon. Sinclair C. Townsend, St. Marys, Ga., senator, fourth district of Georgia; member of the legislative commission and representative of the Board of Trade of the City of St. Marys, Ga.

Hon. John N. Holder, speaker of the house of representatives, Jefferson, Ga., and member Georgia Legislative Commission.

Hon. Seaton Grantland, Griffin, Ga., member of the Legislature of the State of Georgia and member Georgia Legislative Commission.

Hon. R. H. Frohock, St. Marys, Ga., member of the Georgia Legislature and member Georgia Legislative Commission.

Mr. J. H. Becker, 267 West Eighty-ninth Street, New York, N. Y., representing the Board of Trade of St. Marys, Ga.

Mr. William T. Huguley, Hotel New Oxford, Washington, D. C.

The CHAIRMAN. Gentlemen, we will come to order, and I would like to suggest to you that it is quite important we should conclude by noon. Now, Gov. Dorsey, if you will take charge of this hearing, I would be glad to have you indicate who should be heard first and the order in which we shall proceed.

STATEMENT OF HON. HUGH M. DORSEY, GOVERNOR OF GEORGIA.

Mr. DORSEY. Mr. Chairman and gentlemen, the Georgia General Assembly at the session adjourned about two weeks ago created a commission charged with the duty of presenting this project to this body and to the President and others in Washington that might be interested in the matter. I want in a very general way to indicate what we have in mind. This matter is presented now as a war measure, because we are very decidedly of the opinion that it will materially assist in the speedy termination of the war. We propose the construction of a canal across Florida from Cumberland Sound, on the Atlantic, to St. Marks, on the Gulf. It is no new scheme, as you gentlemen, of course, know; it has been discussed since the days of George Washington, and later about 1876 and 1880. The canal suggested is 226 miles long. The St. Marys River and the Suwannee River, the former in Georgia and the latter in Florida, could be utilized with a small amount of dredging, and there would be only about 100 miles that we would have to dig; and we think that that could be done for less than the estimates suggested by Lieut. Col. Gillmore, the engineer by whom this was surveyed in 1876. We suggest now a barge canal. This would enable us to make available the coal in Alabama that is accessible to the Warrior River, by barging it down that river and then across, and would also enable us to utilize the coal in Illinois, both of them, as we understand, good bunker coal. It will not only furnish a large supply of coal and open up these coal fields but will wonderfully conserve coal.

We understand that the National Government is greatly in need of coal, and this would not only conserve the amount that we now have but it is our understanding that it is predicted that the coal of the world will be exhausted in a hundred years from now, and if that be true, then, looking to the future, it is a matter of paramount importance that we conserve coal not only because of the war but because of the future. Now, if this canal is constructed, it will save, as these gentlemen will show in their talks, by reducing the haul from the southeast of all of our commerce going to Europe and South America and Central America over 500 miles. It will not only conserve the coal that is now used in hauling this commerce that distance but will release freight cars, of which we understand there is a great shortage. It will not only do that but it will conserve the coal that is used by ships engaged in commerce in that section of the world, and which now, for purposes of coaling, have to go some 350 miles—I do not pretend to be accurate as to the miles; these other gentlemen will be—farther north to Norfolk, and it would reduce, therefore, the number of ships as well as conserve the coal that is necessary for this transportation. It would also enable you to dispense with the protection now given Florida by the submarine destroyers and save the expense of those destroyers and the coal that is needed to run them. It would also, of course, both as to railroads and ships, save a wonderful amount of labor.

This canal, we believe, after what we consider a very exhaustive investigation, in so far as it could be made by nonexperts, could be built for a sum of money the interest on which could be paid easily, we think, by the saving of the coal alone, to say nothing as to the

other matters we mentioned, and we think it could be built in 6 months, certainly in 12 months. If the National Government looks on this with favor I think that the State of Georgia would be very willing to place such convicts as they have at the disposal of the Government, and we think Florida would do the same; and if we should utilize the German prisoners already in Georgia and those that we expect to have down there it does seem that there ought not to be any trouble from the standpoint of labor.

The construction of this canal would also have a wonderful effect on the food supply directly, as Col. McLendon in his talk will outline, by enabling us to utilize the western and southern corn which now, due to the fact that it has to go through the Gulf Stream for over a thousand miles, sprouts. Then, so far as Georgia and the Southeast is concerned, it would open up as fertile a section of the country as can be found anywhere, and one of the most productive sections; but as to that feature of course you are not interested just at this particular time.

No apprehension need be entertained that the construction of this canal will in any large measure drain that large area of land embraced in the Okefenokee Swamp. If such should be the case, the project would be vigorously fought by the property owners, whose timber holdings in that swamp reach approximately two and one-half billion feet, the value of which can hardly be estimated. The drainage of this swamp should prove disastrous to these timbered lands.

This is a very general outline of what we have in mind, and we should like to have you gentlemen hear from Mr. Davis, who has given the matter a great deal of study, and also from Col. McLendon, and probably from Mr. Anderson.

I want to say before I take my seat that we are greatly indebted to you gentlemen for giving us this opportunity to present this matter. I think it is a wonderful opportunity for the Nation to conserve on a large scale. Many methods of saving have been suggested and put into force, as, for instance, the taking off of chair cars and things of that kind, all of which combined would save a mere bagatelle as compared to the saving that can be effected if this canal is constructed.

Mr. Davis suggests that I state that we took this matter up with President Wilson, and at his suggestion the head of the Railway Administration, or his representative, the head of the Shipping Board, or his representative, and of the War Department, and also the Fuel Administration will give us a hearing at 2 o'clock Monday.

I want to present Mr. Davis, the representative of the Board of Trade of St. Marys, Ga., located on Cumberland Sound.

STATEMENT OF MR. CHARLES HALL DAVIS, REPRESENTING THE BOARD OF TRADE OF ST. MARYS, GA.

MR. DAVIS. Mr. Chairman and gentlemen, there exists in the southeastern section of Georgia a rather remarkable natural condition. I have here the railroad map of Georgia issued by the Georgia Railroad Commission, and you will see the heavily dotted area which is in that southeastern corner. In that area is what is known as the Okefenokee swamp, which embraces 625 square miles, or about 400,000 acres of land, and this so-called swamp [indicating] is one of

the most elevated pieces of land in that section of the country. That is to say, the swamp, so-called, is surrounded by land a few feet higher than the swamp, and the swamp is, in effect, a series of fresh-water lakes, and lies at an elevation of 125 feet above tide. South of the Okefenokee swamp in Florida is another swamp called Bay swamp. That embraces about 196 square miles, and that is slightly higher than the Okefenokee, and can be readily drained into the Okefenokee. The Okefenokee swamp, embracing this enormous amount of water area, constitutes the headwaters of two rivers—one, the St. Marys River, flowing into the Atlantic, and the other the Suwannee River, flowing into the Gulf of Mexico. In general terms, the project embraces the connection of the headwaters of the St. Marys River flowing into the Atlantic and the headwaters of the Suwannee flowing into the Gulf, and the utilization of those two rivers to a large extent; excavating across the swamp, and excavating in addition on the Gulf side so as to hit the Gulf at St. Marks; because at that point the Gulf is deeper, and because from that point there is in existence practically a natural inland waterway running over to the Mississippi.

This map here [indicating], which is a Rand-McNally map of the State of Georgia, shows the St. Marys River as the boundary line between Georgia and Florida. It heads in the swamp and flows south, then east, then north; and then for a distance of 61 miles it flows in a general easterly direction. For this latter distance [indicating] it is navigable, drawing 15 feet of water to the extent of 61 miles, though there are some snags in it. As a matter of fact, vessels drawing 17 feet of water have been up that distance, according to statements of Government reports. The swamp could be more accurately described as a series of fresh-water ponds, interspersed with what are called prairies, consisting of large level tracts of land with about 1 foot of water over them.

On the other side of this swamp is the Suwannee River, running for about 50 miles in a southwest direction toward the Gulf of Mexico. The project is to go from this point on the St. Marys River, 61 miles above Cumberland Sound, across the swamp, cut then into the Suwannee River, run down the Suwannee River 50 miles, and then continue westwardly, coming out at St. Marks; or perhaps going still farther west—and coming out into St. Georges Sound, from which point there exists a natural inland waterway which can be made available with a very small amount of expenditure, and which continues over Lakes Borgne and Pontchartrain, and to the Mississippi River.

The CHAIRMAN. Will any part of that pass through Georgia?

Mr. DAVIS. Yes, sir. The St. Marys River is the boundary line between Georgia and Florida. The Okefenokee Swamp lies in Georgia. Bay Swamp lies in Florida. If needed, the waters of Bay Swamp could be turned into the Okefenokee. Starting at Cumberland Sound, the canal would utilize the St. Marys River for a distance of 61 miles, and for that distance it would lie between the two States; thence for a distance of perhaps 40 miles across the swamp it would lie in Georgia; the remainder of the canal would be in Florida.

Mr. KENNEDY. The canal would drain those swamps?

Mr. DAVIS. Yes, sir. Now, there are two or three suggestions made by the engineers about the size of this canal. One is the building

of a barge canal carrying vessels drawing 8 feet of water with a bottom width of 100 feet. The second is the building of a lock ship canal 250 feet wide at the bottom and 24 feet deep, carrying vessels drawing 22 feet of water, and the third is a sea-level ship canal. In 1876 Lieut. Col. Gillmore, who I believe was afterwards the Chief of Engineers, made a preliminary report on the route across from Cumberland Sound to the Gulf of Mexico. In 1880 he made a supplemental report. These two maps [indicating], this and this, are taken from Col. Gillmore's later report, of which there were in existence only a couple of copies. These reports were reprinted as a Senate document through the courtesy of Senator Fletcher, of Florida. On this map you will see indicated by the long straight line a proposed ship canal, and with varying routes the proposed barge canal. The barge canal, it was suggested, should be continued over from St. Marks to St. Georges Sound.

Now a word about the inland waterway. The inland waterway from New Orleans to Mobile is in actual operation, and I was informed a day or two ago that money had been appropriated by Congress to complete part of it this side of Mobile Bay. The total amount necessary to open this inland waterway from St. Georges Sound (on the southern coast of Florida) to the Mississippi River for barge transportation is a small item. Col. Gillmore in his report makes this statement: That the building of a barge lock canal to carry barges drawing 8 feet of water (which is more water than the barges now on the Black Warrior River can draw); the building of that canal from St. Marys to St. Marks, with a bottom width of 100 feet, and the extension of the inland waterway, thence to the Mississippi River will cost \$8,250,000. Those are the figures and that is what the engineers state. He says the building of a ship lock canal 240 feet wide on the bottom, 24 feet deep, with locks in duplicate—a large lock for the large vessels and a small lock for the small vessels—would cost \$61,000,000. I presume if such a project as the building of a canal of those dimensions were considered it would be far better simply to cut through the entire section and build a sea-level ship canal; and while I have no means of ascertaining what the cost of a sea-level ship canal would be, I should imagine it would be very little, if any, in excess of the cost of the larger lock ship canal.

The project to cut across Florida is an old one. I think John Quincy Adams recommended it to Congress; either John Adams or John Quincy Adams. It has been mentioned at various times on down to the present time, and in 1915 the Government engineers made a special report on five alternative routes across Florida, with which I want to deal a little later on.

In a general way this will show what the canal is [indicating on map]. The straight line represents the St. Marys River and the Okefenokee Swamp. The curved line represents the Suwanee River and the remaining straight line represents the continuation to the Gulf.

As to the effect of the proposed canal, we particularly wish to emphasize this point: The plan which we are suggesting embraces not simply a canal across Georgia and Florida, but embraces also the opening up of an inland waterway from the Gulf terminus of such canal to the Mississippi River. Appreciating the project as a whole,

the enormous effect of such a protected waterway and canal will be seen.

If the average man were handed a topographic map of the United States, showing the contours of the country, and were asked to indicate a point at which a great commercial community could advantageously be located, he would at once be impressed with the value of a location near the mouth of the Mississippi; because he would see that the Mississippi River and its tributaries drain fully one-half of the whole United States, and that freight could be brought to this point down grade, either by water transportation, or by rail transportation, insuring a minimum of cost.

But, at the same time, he would be impressed with the fact that the mouth of the Mississippi River as a commercial center presents a weakness in that it is not on the Atlantic seaboard. The great markets are on the Atlantic seaboard of the United States and in Europe, which is most accessible from the Atlantic seaboard. He would be impressed with the fact that if the mouth of the Mississippi River were only on the Atlantic seaboard, then this would be an ideal location for a great commercial community.

The proposed canal and inland waterway, in effect, is an extension of the Mississippi River to the Atlantic seaboard by a direct, interior, protected water route, through which the products of the States tributary to the Mississippi and the Gulf of Mexico can be delivered without transshipment at an Atlantic warm-water port. That port is 500 miles nearer the Panama Canal than is Chesapeake Bay; it is the nearest Atlantic port to Cuba and South America; and it is a port with ample anchorage area and unlimited wharf frontage. The development of Cumberland Sound as a coal port and as a repair point would be an enormous aid, both to the United States Navy and to the maintenance of our mercantile marine. Cumberland Sound is only 3 miles from the Atlantic Ocean. It is protected by two enormous breakwaters built by the United States Government in recent years at an expense of \$3,650,000. The result of the building of these breakwaters or jetties, between which the entire volume of water in Cumberland Sound and the tributary rivers must reach the ocean, is that the depth of water over the bar is constantly increasing. At Cumberland Sound the tide rises 6 feet. When the tide flows in it banks up the waters flowing into Cumberland Sound. The result is that when the tide ebbs this great volume of water rushes out and scours out the bar, so that the depth over the bar is constantly increasing.

The last Government report which I have been able to obtain shows a depth of 24 feet over the bar at low water, with a tidal rise of 6 feet, making 30 feet at high water. By actual measurements made by some of the local people it seems that the depth is greater than that reported on the Government charts. The depth, however, can be increased as desired, and the maintenance of any required depth will cost but little, because the scour of the tide constantly increases the depth.

Cumberland Sound contains a water area sufficient to take care of the entire Navy and mercantile marine of the United States. Flowing into the sound is the St. Marys River, with a depth of 17½ feet of water at low tide for a distance of 12 miles above its mouth and

a depth of about 15 feet for a distance of 61 miles above its mouth. From the town of St. Marys, located 5 miles above the mouth of the river, a channel 22 feet deep at low tide and 300 feet wide can be secured for \$118,000; and when once secured, the cost of maintenance is extremely small, because the St. Marys River probably deposits less silt than does any river on the Atlantic seaboard. The report showing the cost of this channel, 22 feet deep and 300 feet wide, was made in 1915, and I particularly call your attention to the maps attached to that report. These maps show that there are six small bars to be removed, and those bars represent the silt deposit of the river since the time of Adam. So far as I can learn the Government has never spent but \$7,000 on the maintenance of the St. Marys River since the United States became a Nation.

The building of the canal and waterway will extend the Mississippi River to the Atlantic Ocean. The project has recommended itself peculiarly to the Legislature of Georgia and to the people of Georgia and Florida and of adjoining States and has seemed to them to demand prompt action, largely on the following account:

When Col. Gillmore made his report in 1876, he said the greatest thing for the development of the Northwest would be to open this canal, so as to enable the food products of that section to be carried by an all-water route to the Atlantic Ocean. He did not mention coal, because at that time the coal development was extremely small, and the Alabama coal fields had been very slightly developed. Since that time the Alabama coal fields have been so developed that coal is being brought down to the Gulf, 450 miles, at a very cheap cost of transportation, and is being shipped in barges westwardly to New Orleans. Instead of being turned westwardly to New Orleans, it would seem that it could be turned eastwardly through this inland waterway and delivered at Cumberland Sound, where St. Marys is located, on the Georgia side and Fernandina on the Florida side.

The CHAIRMAN. Fernandina is the chief city on the Atlantic coast. What city is nearest the proposed terminus of this canal on the Florida coast side; I mean the port that is nearest the mouth of the St. Marys River?

Col. McLendon. Fernandina and St. Marys are at the mouth of the St. Marys River.

The CHAIRMAN. What port is on the Gulf?

Col. McLendon. St. Marks is on the Gulf. It would be the point of entering the Gulf of Mexico. That is not an important port. Next west of that would be Appalachicola.

The CHAIRMAN. How far is that?

Col. McLendon. I think some 60 miles.

Mr. Davis. And the proposal to extend the canal to St. Georges Sound on the Gulf puts it near to Appalachicola.

Col. McLendon. If Mr. Davis will permit me, I will explain the situation there. The Appalachicola River drains a large part of the State of Georgia. Its tributaries, the Flint and Chattahoochee, extend up into the interior of Georgia and to the northern part of Georgia. For instance, the Chattahoochee runs within 8 miles of the city of Atlanta and is navigable from Columbus City. The Flint is navigable from Bainbridge. Being given admission to the Gulf at Appalachicola will open up that entire country to the transportation facilities of this barge canal, if the commerce can

reach the Atlantic seaboard. I simply wanted to call the attention of the committee to the importance of this point not locally but in the matter of the development of the interior country for 400 or 500 miles.

The CHAIRMAN. That answers the query.

Mr. DAVIS. Now, I am getting to deal with the results of the construction of this canal, primarily as a war measure. The governor of Georgia, in pursuance of the order of the legislature, has gone to the President and asked that this be considered as a war necessity; and the heads of various departments—that is, the War Department, the Fuel Administration, the Shipping Board, and the Railroad Administration—are to meet Monday to hear those points emphasized. Taking up its necessity as a war measure, I am first going to deal with coal. Within the last three or four weeks—I do not remember the exact date—a statement was issued by the President saying in effect that one of the greatest matters, one of the matters of most importance, confronting the American people was the shortage in coal and the need for coal, and urging conservation of coal and increased production of coal on everybody to-day able to help.

We to-day on the Atlantic seaboard have one great bunker coal port. It is actually more than one port, but I mean the ports on Chesapeake Bay, entrance to which is obtained through Cape Henry and Cape Charles and which I might generally designate as Hampton Roads. From the entrance between the Capes to the coal piers of the C. & O. and the Norfolk & Western Railroad it is about 22 miles. Last winter that port was frozen up. I am from Virginia, not very far from Norfolk, and live in a town through which the Norfolk & Western runs, and I am reasonably familiar with the conditions in that section. The four railways coming into the Chesapeake Bay district are the Baltimore & Ohio, the Chesapeake & Ohio terminating at Newport News, and the Norfolk & Western and Virginian, both of which terminate on the south side of the James River.

Those are the four great soft-coal roads. There is a very great congestion in coal delivery at Norfolk, as well as great trouble about securing sufficient mining of coal. The coal delivered at the Chesapeake Bay harbors is derived practically from what might be termed the Pocohontas field, the field lying in the western section of Virginia, in West Virginia, in Kentucky and Tennessee, and partly in Ohio. In Alabama there exists an additional coal deposit which in effect is not available to-day on the Atlantic seaboard for bunker purposes; because, while it is available on the Gulf, the need of shipping, the necessity for handling freight, the demands on the railroads, and the other conditions which the war has brought upon us, have made it very difficult to get coal to the Atlantic seaboard. The Atlantic seaboard must be the objective during the period of the war and for a long period thereafter on account of the war conditions and of the necessity of rebuilding in Europe after the war.

By the opening of this canal, coal transportation from the Alabama fields to the Atlantic as an accomplished fact is in the hands of the Government, which has already taken over the Black Warrior Canal system and made appropriations for increasing its depth. That coal could be brought easily to St. Marys or Cumberland Sound or Fer-

nandina, and could be delivered, I should judge, cheaper than Pocahontas coal is delivered at Norfolk; because, according to a report I have here, that coal has been delivered at Mobile at approximately 30 cents per ton. Pocahontas coal in ordinary peace times costs \$1.10 to \$1.20 per ton to deliver at Hampton Roads. If Alabama coal can be brought in barges by canal for 80 cents a ton 450 miles to the Gulf, it seems to me it could be carried an additional distance of 500 or 600 miles at a slightly greater cost; which would bring the actual combined cost to a little over one-half of the cost of transporting coal to Hampton Roads from the Virginia coal fields.

The Virginian Railroad was built a few years ago; it is 505 miles long and hauls the biggest loads at the smallest cost of any railroad in the United States. It was built practically for cash by a man alleged to be one of the wealthiest men in the country—Mr. H. H. Rogers—and its present bonded indebtedness is about \$30,000,000, and there is about \$59,000,000 of stock. Assuming that this combined amount of \$89,000,000 in any way indicates the cost of construction of that railroad from the coal fields to tidewater, it appears that this canal as a barge canal for inland transportation would cost not one-third, probably not one-fourth as much; and barges could then bring Alabama coal to an Atlantic port without transshipment. It would make available not only the Alabama coal fields but the great deposit of coal in southern Illinois, which could be barged down the Mississippi, through the inland waterway and the canal to Cumberland Sound and the Atlantic Ocean, as you will see from the map. Moreover, there are the Pennsylvania, Ohio, and Illinois coal fields which would be connected by this canal with the seaboard. There exist in western Kentucky large deposits of coal of inferior grade which is not suitable for bunker purposes, because it slacks, but which could be utilized for domestic and manufacturing purposes. There exists in southern Illinois a great deal of the finest quality of bunker coal, and in one section there is a vein 9 feet in thickness, and that vein is on streams tributary to the Mississippi and could be brought down by barge.

Mr. KENNEDY. You are not going to get the coal to ship to the seaboard from that region. The southern Illinois coal is the best coal we can get for domestic purposes. My territory in Iowa is thrown in the zone supplied from southern Illinois. We can not store Iowa coal because it slacks; it causes combustion. We are thousands and thousands of cars short now of what the Fuel Administration promised up until this time. You can not take any southern Illinois coal, in my opinion, and transport it across to your canal. It would not be practicable, because there is a tremendous demand for that coal in the territory where it is mined.

Mr. DAVIS. The United States is short between 80,000,000 and 100,000,000 tons of coal. Iowa is suffering from a lack of coal, just as is Virginia. Last summer they proposed to shut up the tobacco factories in Virginia because the Government needed the coal. I do not pretend to say there is not a shortage of coal. I mean to say that for the winning of the war—for bunker purposes—the Illinois coal fields have got to be made available first, just as the Pocahontas coal fields are made available.

Mr. KENNEDY. How long are you figuring on the war lasting?

Mr. DAVIS. I could only give a guess, sir.

Mr. KENNEDY. If you are going to build this canal for war purposes, you must be counting on it lasting a good while.

Mr. DAVIS. The canal should be built in a year. The United States engineer says so.

Mr. CLEARY. How long is the canal?

Mr. DAVIS. The canal, from the Atlantic to the Gulf, is 226 miles, with only a hundred miles to be excavated. I will read from the statement of the engineers. They say they can build it in a year, and they say it will cost \$8,250,000 to build it. I think it can be built in a very much shorter time, for reasons which I will state, and I think it will probably cost very little, if anything, more than this estimate.

Mr. KENNEDY. We were told by Gen. Keller, who was before our committee speaking in regard to the Mobile project, that there was little coal going down the Black Warrior, that it was being shipped by rail because there was a tremendous demand for it inland by rail.

Mr. DAVIS. I think you will find, as a matter of fact, sir——

Mr. KENNEDY. Gen. Keller was for years stationed in the Mobile district. He made that statement before this committee last session.

Mr. DAVIS. I think you will find, as a matter of fact, if you will apply to the Fuel Administration, that this is true: The coal needs of Alabama, just as, I presume, those of Iowa, are in excess of the supply of coal in Alabama. I do not mean to say there is an over-supply in Alabama, in the Pocahontas fields, or southern Illinois, or anywhere else in the United States. There is not. The coal needs in Alabama are in excess of the Alabama coal fields; but the first and paramount need of this country is for the supply of our ships and our Army, and everything has got to give way to that; and the desire of the President is to get the coal to the seaboard for bunker purposes, and whatever must be sacrificed for that purpose will be sacrificed; and as a war measure I am saying that if that is true, even though the coal needs in Alabama exceed the present supply; even if the coal needs in Kentucky, Ohio, and Illinois exceed the supply that is available from those States, if the Government needs that coal for bunker purposes to win the war, then this is a solution for getting the coal. It makes available new fields. You can have increased production both in your old fields and your new fields, and you have a new method of transportation at lower cost, and this canal can handle more than any railroad that has ever been built.

The Erie Canal is closed four and five months of the year with ice. This canal will never be closed with ice.

Mr. CLEARY. How close does the terminal of the canal run to the coal fields?

Mr. DAVIS. In a great many places on the Black Warrior River the coal is practically on the river.

Mr. KENNEDY. Gen. Keller said the coal was not tributary to the river, and stated that was one reason why the coal was going by rail. He said there was no coal to amount to anything on the banks of the Black Warrior River. It requires some rail shipment from the mines to the river.

Mr. DAVIS. My statement was that some of the coal was on the river. According to Government statements, with all due deference to Gen. Keller, the coal is accessible to the river. I don't mean you

can pick up a shovel and throw the coal into a barge, but I mean that by very limited rail transportation it can be shipped out of the mines to the river in many places. If those Government reports are not true, then I may be wrong. Of course, gentlemen, I do not base my statements on my own opinion at all, but on authentic reports of Federal or State officials.

Gov. DORSEY. The Georgia Council of Defense investigated the coal shortage in Georgia last winter, and we found that there were hundreds of cars loaded with coal standing in the yards and the railroad people said they did not have motive power to get them out, and there was a car shortage, which they said accounted for the shortage of coal as much as any other fact.

Mr. DAVIS. That is the coal situation. In the second place, as a war measure, the opening of this canal and inland waterway will afford a protected means of bringing to the Atlantic seaboard lumber, agricultural products, and cotton, as well as coal drawn from some twenty-odd States which adjoin the Mississippi River or its tributaries, or the Gulf of Mexico. The U-boat is not a theory; it is a fact. It has been seen around Cumberland Sound. By building this canal and inland waterway you secure a protected route from the Mississippi to the Atlantic, free from the menace of the U-boat. Moreover, as a war measure you have in Cumberland Sound the most remarkable harbor south of Cape Hatteras. A vessel can get from the Atlantic Ocean into Cumberland Sound within 30 minutes, and when it gets into Cumberland Sound it is accessible to the shores of Cumberland Sound and to all the land tributary to the St. Marys River, running for 61 miles as shown here [indicating on map], and to the wharf frontage on the rivers lying north of the St. Marys River and flowing into Cumberland Sound. I should say there is available easily 100 miles of deep-water frontage in that immediate vicinity. The anchorage is good; there is enough anchorage for not only our present fleet and merchant marine but for any we will ever build.

Moreover, Cumberland Sound is the south Atlantic port nearest to Cuba. While Jacksonville lies about 35 miles south of the entrance to Cumberland Sound, yet Jacksonville is about 26 miles up the St. Johns River, and Cumberland Sound is only about 3 miles from the ocean. Cuba lies just south of Florida. As I understand it, there are no coal deposits in Cuba, but Cuba possesses some of the greatest iron-ore deposits in the Western Hemisphere, and also contains large deposits of manganese. It would seem practical that the coal and coke from the Alabama fields, and the limestone in Florida, through which the canal would pass for about 50 miles, could, at Cumberland Sound, meet the iron ore and manganese from Cuba, making possible the development of a great steel industry and a great steel shipbuilding industry at a warm water port on the south Atlantic coast. Cuba imports its coal, and the vessels carrying coal to Cuba could bring back iron ore and manganese as a return cargo.

Moreover, Cumberland Sound is a port from which a direct course can be laid to the British Isles, to the English Channel, or to any European port. And a direct course can be laid from Cumberland Sound to the Straits of Florida. A vessel from a British or European port, destined for the Panama Canal, and which wishes to

coal on this side, now has to go into Chesapeake Bay. To get to the coal piers in Chesapeake Bay, the vessels must go between Capes Henry and Charles and then go 22 miles to the coal piers. Returning, they must cover the same distance, and then go eastwardly out to sea, about 100 miles, in order to get around Cape Hatteras. Then they must come westwardly some 250 or 300 miles to get through the Straits of Florida, on account of the great westward curve of the coast below Cape Hatteras. By making Cumberland Sound a coal port this excess steaming could be avoided. It is interesting to note that the longitude of the Panama Canal lies about 50 miles east of Cumberland Sound, and is the same as the longitude of Charleston, S. C.; although the general public seem to have the impression that the Panama Canal is about south of San Francisco. The fact is that the longitude of San Francisco is nearly 3,000 miles west of the longitude of the Panama Canal.

In addition to that it is worthy of consideration, particularly before this committee (though perhaps it might not be strictly considered as a war measure) that the development of the port of Cumberland Sound as a coal port would bring about an economic development of the country in the preservation and maintenance of our mercantile marine. We have \$400,000,000 invested in the Panama Canal. It is presumed that the Panama Canal is going to be the most important factor in affecting the world's transportation since the Suez Canal. If that is true, then the establishment of a coal port on the South Atlantic seaboard, 550 miles farther south than Hampton Roads, is necessarily going to be an asset in diverting commerce through the Panama Canal. A ship can go into Cumberland Sound under its own steam within 30 minutes. The development of Cumberland Sound as a coal port really amounts to putting your coal pile on the side of the road; and the ship, whatever its destination, can afford to go in there and get the coal and go out again and continue its voyage. If the development of that coal port enables a vessel to come in under such circumstances, the harbor will meet all the requirements of shipping. The incoming cargo can be delivered at Cumberland Sound and the return cargo can be secured. Coal can be obtained at reasonable prices and necessary repairs can be made at that point. Certainly a port which is the Atlantic outlet for the Mississippi River and the Gulf and Southeastern States offers a market for imports and would furnish sufficient return cargo to justify its development and insure its continued growth.

I have here a map showing every coal port in the world. I think I can say without fear of contradiction, that England's maintenance of her supremacy on the seas is as much due to its coal ports and port facilities as to its ownership of ships; and if we expect to utilize the great mercantile marine we are now building, it is the part of wisdom to look forward. Though this canal project is presented as an immediate war measure and will be of great value in war time, helping us win the war by furnishing fuel in the shape of coal, oil, food, and other raw materials at an Atlantic seaboard port where you never have any frozen conditions; yet it is more valuable in peace times, in that it will enable us to strengthen and use the greatest asset we control, the Panama Canal; and it will forever continue to help in the development of the southeastern section of the United

States, and of the section drained by the Mississippi River; and it will help us in maintaining our supremacy on the seas.

I thank you, gentlemen.

Gov. DORSEY. Mr. S. G. McLendon, the representative of the Georgia Council of Defense, will now address the committee.

STATEMENT OF COL. S. G. MCLENDON.

Mr. MCLENDON. Mr. Chairman and gentlemen, I am not related to Sir Thomas Gradgrind, but I will deal only in facts. The question we present to you to-day is not local; it is not sectional; it is not emotional. It is one of the cold, hard conditions which surround us, which are adverse, and we may, by wise conduct on our part, remedy those conditions and benefit very largely. The report of the Secretary of the Treasury for 1914—the last year of peace—shows that the total customs receipts of the United States amounted to \$298,000,000. Draw a line from Portland around to Cape Hatteras, and the record shows that \$245,000,000 of that \$298,000,000 was collected at ports north of Hatteras. That record further shows that \$202,000,000 of the \$245,000,000 were collected at the port of New York. Draw a line from Cape Hatteras to Miami, including that port, and the total customs revenues of the United States for 1914 from that part of our coast—almost exactly equal in length to that lying north of it—amount to \$315,000. The chief port on that part of our coast was Savannah, and her collections amounted to \$150,000. Now, take the Gulf, counting Key West as a Gulf port. The customs revenues for the Gulf ports as far west as Galveston and including Galveston amounted to \$15,000,000, of which some \$11,000,000 were taken in at the customhouse in New Orleans. There you have, generally, a picture of a dead line covering 600 or 700 miles of our coast barren of commerce; a stranger to commerce except to our commodities that are gathered and produced in their immediate vicinity—lumber, cotton, phosphate rock, and that is about all. We send those out. We get nothing in. The total dutiable imports for the whole 700 miles from Hatteras to Miami was only \$752,000.

Now, it is not worth while for us to go into that save to find out why that situation exists. The thing which concerns us mostly to-day as a war proposition, as a commercial proposition, is, Ought that condition to exist, and can it be changed? I would direct the minds of the committee—the world is too large to cover in one speech—only to our South American trade. Mr. Davis, can you get a map which will show the world there? Our trade with the West Indies and South America amounts to \$1,250,000,000. That trade, whether incoming or outgoing, is controlled, so far as South America is concerned, by two points. One is Pernambuco, the port nearest to the shoulder of Brazil, from which our hydrographic office is kind enough to give us the distances by sea. All of our trade with the east coast of South America—Brazil, Uruguay, and Argentina—which amounts to over \$400,000,000 a year, has to pass Pernambuco. Therefore, as to all territories south of Pernambuco, all the great ports along that coast—Bahia, Rio Janeiro, Montevideo, Buenos Aires, and so on—all of that trade must pass that point. Therefore, in comparing our distances, we need only deal with Pernambuco.

The distance from Pernambuco to New York is 3,698 miles. From Pernambuco to Cumberland Sound is 3,681 miles. Therefore, in the matter of ocean transportation nothing is involved as to whether that commerce can go through one port or through another one. But there is this difference: I speak now of the particular and especial interest of the whole Southeast—east of the Mississippi and south of the Potomac—a region which, we may fairly say, furnishes one-eighth and consumes one-eighth of our trade from that territory. As the heart of the South we take Atlanta, Birmingham, and Nashville. When you get to the commerce to and from Atlanta, coming by the port of New York, it involves a rail haul of 884 miles. If that same commerce, without even the advantage of a reduction in the cost of ocean transportation, should be brought in at Cumberland Sound, or any near-by port, the rail haul to Atlanta would be 300 miles. Therefore, there is a rail waste going on to-day that has been going on with all of that trade which is avoidable by simply changing the route of transportation. I happen to know that in Atlanta cotton gins are made to send to New York and shipped to Pernambuco—584 miles of rail waste, involving coal, labor, equipment, and wear and tear of track. That could be saved.

Take Nashville, and the situation is the same. Nashville is 1,047 miles from New York. It is 588 miles from Cumberland Sound. Take Memphis. Memphis is 1,237 miles from New York. It is 719 miles from Cumberland Sound. Even St. Louis is 90 miles nearer to Cumberland Sound than it is to New York. The distance to New York is 1,065 miles and the distance to Cumberland Sound is 965 miles.

So, when you take the commerce of that great region there, its agriculture, its imports and its exports, its manufactures, and there are in the seven States nearest Cumberland Sound—the Carolinas, Georgia, Florida, Alabama, Tennessee, and Kentucky, the States which would most naturally be interested in the development of the nearest port—36,519 manufacturing establishments. So, whether they buy or whether they sell, if they deal in South American trade their stuff must go to New York.

Only the other day I met a Macon gentleman (Macon is 200 miles from Cumberland Sound or less) who was on the way to New York. He told me he was going there to close a contract to furnish 9,000,000 barrel staves and 1,000,000 barrel heads for Brazil, to be shipped 600 miles out of the way simply because the facilities for this transportation by the shortest and cheapest route had not been provided.

MR. KENNEDY. Is the port accessible by rail from the territory tributary?

MR. McLENDON. Yes, sir.

MR. KENNEDY. How many railways do you have?

MR. McLENDON. Only one, but Fernandina is connected with the seaboard on one side. It is only 10 miles to Cumberland Sound and there is a railroad in there. It happens to be one of the small roads, but so far as the railroad problem is concerned that is the merest trifle. A railroad is there now. You can double track it for a trifle. Mr. Winchell, who went down there and inspected the situation, said they did not need but one of them; that he could take it and run I have forgotten how many trains a day over it. All you need is port facilities. There is your open ocean; there is your harbor; there is

your immediate proximity to the deep sea; there is every condition there except a proper landing place for the ships and a proper coal supply.

That disposes of the Atlantic side of South America. Now we come to the Pacific side. All of our trade with that coast, including Ecuador, Peru, and Chile and including the Republic of Panama, because it is directly on the canal, is over \$200,000,000 a year. That commerce does not come in or go out through South Atlantic ports. Take the lumber; take the imports free of duty, and on the whole South Atlantic coast in 1916 the imports only amounted to \$16,000,000. All of that trade, amounting to over \$200,000,000, must come through the Panama Canal.

Therefore, the canal is the other fixed point in our commerce with South America. That commerce moving from the Panama Canal to New York travels 2,017 nautical miles. For the statute miles just add 15 per cent. Coming to Atlanta it will travel 884 miles, or 584 miles out of the way by rail. The distance to Cumberland Sound is 1,550 miles. Therefore, it travels 467 miles out of the way by sea and 584 miles by rail. Literally the same thing would exist as to Nashville and Birmingham and Memphis. None of that trade comes in or goes out through a South Atlantic port. The oldest inhabitant on the seaboard, from your own city, Mr. Chairman, down to Key West, never saw a cargo of coffee or sugar come in. One of the reasons is that shipping on that coast can not be provided with coal, as it is north of Hatteras.

Now, take our Cuban trade. That amounted to \$408,000,000. Cuba, of course, is the world's sugar bowl so far as cane sugar is concerned. The distance from Habana to New York is 1,227 miles, and we may accept Habana as representative of the whole of Cuba. The distance from Habana to Cumberland Sound is 527 miles. Therefore, as long as conditions exist which force that commerce for the Southeast, extending clear to the Mississippi River, through the port of New York, one man, Uncle Sam, does all the rail hauling, and he subjects that commerce to the unnecessary burden of an average of 500 miles of rail waste and a waste of 700 miles by sea.

We have a congested condition at New York. No matter how that occurred, it is true. It is liable to be locked up with ice, a condition which does not exist at Cumberland Sound and can not exist. Here is a port that can not freeze, a port easily accessible to the United States, that has the barrier of one railroad, because that is all we have. Why will the Government of the United States, with the whole world crying for coal, the United States being many thousands of times the liveliest buyer and consumer of coal on earth for the purpose of railroads and steamships—why will the United States Government, one man and one road, continue to haul traffic at such an astounding waste as that when attention is called to it? Those are the facts on the record; those are the distances furnished by our railroad people. Here are the records furnished by the Treasury Department. Gentlemen, is there any remedy for it? Ought that condition to exist? How can it be remedied? One of the methods proposed not only for the removal of that condition but for opening up to the Southeast equal opportunities of trade, and for opening up to the Mississippi Valley opportunity to develop its own resources

and to ship its own commodities, minerals, and agriculture to the world on a fair basis, would be the shortening of our water routes from the West into the Atlantic.

Take the proposition of grain. Mr. Hoover made a speech in this city in March, in which he undertook to explain why we did not ship corn to Europe instead of wheat. Of course, one reason is those people do not know what a good thing they would have in corn; they do not know how to cook it. But the reason he gave was that in certain months of the year you can not ship it. Why? Ship it from where? You can not ship corn in May and June or April from Gulf ports because the summer is coming on, because the ship laden with corn immediately on leaving any Gulf port gets into the Gulf Stream, swings around the peninsula of Florida, going south 500 or 600 miles, then turning north and sticking to the Gulf Stream until you get around Hatteras, where it goes first to Norfolk for coal and then goes across the sea. There is a transportation in warm water in a warm season which produces heat and moisture and deteriorates the corn and destroys its value as food in Europe. That matter some years ago was the main subject of complaint by our consular agents in their daily reports to the Department of Commerce. Report after report would arrive. They even located it and gave it the name of Gulf corn. It was not Gulf corn; it was Missouri corn; it was Iowa corn. It is your largest product that is put out of business because it is shipped that way. Of course you can ship to Boston, to New York, to Philadelphia, where water conditions are not against you; but you are denied water transportation right at your door simply because you are under the necessity of turning the capes of Florida.

Now, there is a map of the coal ore [indicating]. The long stretch of black there, that looks somewhat like the "Big Stick," represents the eastern coal development of Pennsylvania, Virginia, and all the rest of them. We are not interested in Pennsylvania particularly; we are coming farther down South. In Alabama, Tennessee, and Kentucky, representing the southern end of that black belt there, the geologists tell us that the original coal supply was 172,000,000,000 tons, equal to the coal supply of the Empire of Germany. The geologists also tell us that Missouri had an original coal supply of 40,000,000,000, that Illinois had 240,000,000 tons. There you are shaking hands across the Father of Waters, the Mississippi, and you are shut in. Look at that map. Coal from Missouri and Illinois can not move east because it has got to compete with coal nearer the seaboard and nearer the centers of population. That map demonstrates that. You are shut out of that market. Coal can not move west for the same reason—that you meet your impassable obstacle in the coal that lies westward. Here is nature's great highway, the Mississippi River, the only avenue of shipping this wonderful gift of nature, converting it into gold and helping the world. British statesmen will tell you that British coal is worth just as much as British gold. The day will come when American coal will be worth more than American gold. Now, why? There is not a pound of coal in Cuba. On the whole, ten or twelve thousand miles of seaboard in South America—start at the Panama Canal and go around by Pernambuco, and all along back by the northern coast of Brazil, back to the Panama Canal—and there is but one point at which native

coal can be had, and that is at Coronel, in Chile, and there they have inferior coal used only by the Chilean Government in the operation of its railroads; used by steamships only when they can not get Australian coal, because the west coast of South America is supplied by Australian coal and a little British coal, and occasionally a handful of American coal. The railroads throughout South America have to use imported coal; they have no coal.

Every industry needing coal has to buy imported coal. The British and the German people discovered that. Hence the large investment of British capital and German capital in every sort of industry in the prosperous regions of South America, because they did not have to pay for their stuff in money. Here is a fellow who needed coal. They needed wheat and they needed coffee; they needed meats, cargo after cargo. They paid for that in what those people needed. They opened banks; they invested in electrical apparatus, street railways, water power, and things of that kind. Now, Great Britain first realized the tremendous value of her coal as a medium of exchange and a substitute for gold. And they use it to great effect, as the Germans were doing prior to the outbreak of this war.

Now, we have the situation. Talk about transportation! The Virginian Railroad transports coal about as cheaply per ton per mile as any railroad in the world. It ought to. Seventy-one per cent of its total tonnage is coal. They carry whole trainloads of coal; they have trains that are over a mile long, drawn by one locomotive and manned by one crew. My recollection is that their coal cost is $2\frac{1}{4}$ mills per ton per mile to Norfolk. You can haul coal by water at 1 mill per ton per mile; it is being done. The English do it; we do it. We ship coal to Panama from New York at a cost of eight-tenths of 1 mill per ton per mile, and we are in the business in a way; but we only supply the North and South commerce passing through the Panama Canal, plus what little we may handle going to the Far East.

Now, let us get back to New York. We have already shown the transportation waste in carrying coal to New York and passing it through that gateway when you get it to New York. Let us take Manila as an illustration. Get Prof. Emory Johnson's report. You remember he was appointed a special commissioner by President Taft to investigate and report on the Panama Canal. A map was prepared by the Interstate Commerce Commission from time to time showing the changes that were made in world-trade rates. Mr. Johnson tells you in his report that two sister ships of equal tonnage leaving New York for Manila, one going by the Suez, the other going by Panama, in the round trip will consume, one, 4,475 tons and the other 4,490 tons.

In other words, there is 15 tons of coal difference. But here you have piled up at New York business mountain high and at a point from which that business may go just as easily via the Suez as via the Panama Canal. The actual difference in distance in miles is less than 20. But open a coaling station on the South Atlantic, open a coaling station at Cumberland Sound, and American commerce bound for Manila and the Far East will have an ocean haul 467 miles shorter via the Panama Canal than New York will have via the Panama Canal or via the Suez Canal. Hundreds of thousands of tons of

freight could be shipped through a South Atlantic port with this saving of 467 miles of ocean haul, but also with a saving of hundreds of miles of rail haul in order to get to the seaboard.

You may say, "Why do you emphasize Cumberland Sound instead of some other South Atlantic port?" The answer would be that the United States Government owns now 1,600 acres of land on Cumberland Sound and on the north end of Amelia Island, and also owns 720 acres of land on the mainland of Georgia opposite Amelia Island, known as Point Peter Military Reservation, and the State of Georgia owns not less than 1,500 acres adjoining Point Peter Reservation.

Establish a coaling station at Cumberland Sound, and ships trading with Wilmington, Charleston, Savannah, Brunswick, and Fernandina and engaged in South American trade can coal at Cumberland Sound, first, because it is in the line of their voyage, and, second, because of its immediate proximity of the high seas and because there will be no need of pilotage or towage in entering or clearing this port. Wilmington is on the Cape Fear River 27 miles inland, Savannah is on the Savannah River 28 miles inland, Jacksonville is on the St. Johns River 27 miles inland, Brunswick is 15 miles from the bar, while Point Peter Reservation is only 4 miles from the open sea.

You gentlemen of this committee, in your river and harbor bill of 1917, appropriated \$350,000 for the maintenance of the channel of the Savannah River, \$330,000 for the maintenance of the channel of the St. Johns River, and only \$7,000 for the maintenance of the channel of the St. Marys River. The St. Marys River carries no silt, and, owing to the scientific construction of the jetties at Cumberland Sound, the St. Marys River scours the channel to the sea and keeps it open.

Time consumed in coaling at Cumberland Sound would be a mere trifle as compared with the time that would have to be consumed in coaling at any other south Atlantic port.

Time in loading a ship is everything. Time in loading a freight car is a very small matter. Reducing it down to actual dollars and cents it cost us, the people of the United States, \$30.41 an hour to operate the *Achilles*, one of the ships belonging to the Panama Steamship Co., and \$36 an hour to operate the *Ulysses*, another one; \$700 or \$800 a day. When you go to calculate expenses like that, a ship does not want to spend two or three days waiting to put on coal. If you put it on at Cumberland Sound a ship can leave the open sea and within 30 minutes be at her coal berth. She takes her coal and in 30 minutes she is out on the sea and away. Now that shipping will not affect the west coast of South America so much as it will the north coast, with which our trade amounts to over a hundred million dollars a year.

Take our trade with the United States of Colombia. They have a free passage through the canal, pay no toll, but it is worth very little to them, because they do not travel that way; their great ports are on the Caribbean Sea; Santa Marta is the chief port. We buy many million dollars worth of coffee from Colombia. There is that trade down east on the northern coast when you get to Venezuelan ports. You get still farther, you go to Para, in Brazil, at one time the greatest rubber port in the world. All that shipping with the north coast of Brazil, and the east coast of Brazil goes north of Hatteras,

because of coal and other conditions, instead of going to a port where they can use coal coming down the Mississippi.

Something was said a little while ago about their not shipping coal down there. Certainly not. Whoever expected that should look at the conditions. The Government goes to work and spends three or four or five million dollars canalizing the Black Warrior River. Capital will not go into that kind of business. I was consulted by some gentlemen who wanted to put money there just before the Black Warrior was opened. I advised them not to put a dollar in it. They said, "Why?" I said, "Simply because I can go there and start a barge line against you the next day, and some other fellow will come along and do the same thing, and we will cut each other's throats, and we will all make no money."

Mr. KENNEDY. We were told that all the coal would go down there. That was the same as in the case of the Big Sandy, where we put in a lot of locks and dams, and I think the engineer's report says 12 tons of coal went down the Big Sandy.

Mr. McLENDON. Certainly not; because there conditions are such that it can not move there, but the United States has taken over the barge lines on the Mississippi and on the Black Warrior, and if you will wait six months you will see the difference, because they have the power to carry at the lowest cost of transportation.

Mr. KENNEDY. You are assuming that this southern Illinois coal is going down the Mississippi River. The Iowa delegation some weeks ago called on the Coal Administrator with regard to coal for our State. He said, "The first thing we are going to do is to supply southern Illinois coal for domestic use in your State." If, as he stated, they were far behind the schedule in supplying this coal for domestic use in our zone, it is evident none can be shipped down the Mississippi River.

Mr. BOOHER. The Coal Administrator is doing that now.

Mr. KENNEDY. He was talking about bituminous coal.

Mr. BOOHER. There is no coal going down the Mississippi River; there may be south of St. Louis.

Mr. McLENDON. For that there are various reasons. Coal shipped from Pittsburgh to New Orleans travels 2,100 miles, and it can only travel during the summer months. When they relied upon Pennsylvania coal from Pittsburgh, it had to be accumulated in large quantities and stored for winter use and bunker use on ships. When the rivers were frozen up they could not transport it at all. A coal famine for bunker purposes in New Orleans meant the wiping out of that port. I am speaking of coal much lower down, the deposits in Missouri and in Illinois and in Alabama, in Tennessee, and Kentucky, all of which are upon the lines of water which run into the Gulf at Mobile Bay and at New Orleans; why, the conditions have never existed that would induce the transportation of coal that way. Now, the Government, within the last 30 days, has created new conditions. The Government is operating a barge line; the Government is starting to operate the barge line; and I do not want to play the part of a prophet at all, but the next generation may take over the coal transportation of this country, and why can not coal come under the control of the Federal Government? Coal is going to be a problem always. If we are ever to build up a trade with South America, we must do it like Germany and England did. We have the nearest

coal. You can put coal from the Illinois fields onto the north coast of South America; you can put it onto the west coast of South America; but your European ships will not do that because of the necessity of turning the reefs of the Florida coast and the greater sea haul.

The Panama Canal was agitated for 300 years and finally built. The Suez Canal was agitated for a thousand years, and the engineers reported against it and said it was impracticable, but it was built. Coal is the one burden that is going to rest upon the world for some time to come. We might as well confront it. The diminution in production will probably not be restored. Our annual production prior to the outbreak of the war was about 500,000,000 tons. The coal people tell us there is a shortage of 100,000,000 tons. How are you going to build up to the point below which we fell? We must economize in the use of coal, and the arguments we present here are for the necessity of that canal, and no others need be gone into at the present time. This canal can be built from the mouth of St. Marys River to St. Marks for \$5,209,000.

Mr. BOOHER. What is the depth of that canal?

Mr. McLENDON. That is provided for in the report that Mr. Davis discussed. It provided for barges drawing 8 feet.

Mr. BOOHER. Do you think it would be advisable to build a canal for barges drawing only 8 feet; would you advise the building of such a canal?

Mr. McLENDON. I would.

Mr. BOOHER. There are canals of that depth in the United States to-day, and the people that use them are beseeching Congress to deepen them now.

Mr. McLENDON. The situation on the canal question is one that is historical. In the early history of this country we had no railroads, because the world did not have any. Every State in the Union started out to build canals and public roads. George Washington planned and in large measure built the Cumberland dirt road. New York took up the subject of the Erie Canal. De Witt Clinton will live perpetually in the history of that State as the great builder of the Erie Canal. Illinois, Missouri, and Ohio did the same thing. If you will take one page of the World Almanac and get a list of the canals there, you will find that they are all dead, except the Erie Canal, but that is no argument against a canal which will carry business.

Mr. BOOHER. Why build it to that depth; why not make it deep enough at the start?

Mr. McLENDON. There is no objection at all to that.

Gov. DORSEY. Let Mr. Davis answer those questions, as he has looked into them.

Mr. DAVIS. The governor suggests that I cover two or three additional points. Answering your question as to the depth of the canal, the only figures that we have from the United States engineers are the figures for a canal carrying barges of 8 feet and figures for a canal carrying ships of 22 feet. Now, as a war measure, for the purpose of bringing coal, food, timber, agricultural, and other products of the Mississippi Basin and the Mobile River Basin to the Atlantic seaboard, our suggestion is that the Government immediately construct a barge canal, and we are bound to take the only accurate figures we have. The estimate of the cost to the United States of a

barge canal of the dimensions stated, according to Col. Gillmore, is \$8,250,000; and the cost, according to a very distinguished engineer of Florida, was less than that.

Mr. KENNEDY. Do you not think the cost of constructing a canal would be greater at this time?

Mr. DAVIS. I think the cost might be greater, but on the other hand, at the time those estimates were made, they did not use the suction dredges that are available now.

Mr. BOOHER. You misunderstood my reason for asking that question. I want to know why you ask for a canal only deep enough to carry barges drawing 8 feet when every canal in this country that this committee has been called upon to appropriate for is claimed not to be deep enough; the people are all wanting them deeper. Why go to work and build this canal to only carry boats drawing 8 feet of water when in a few years you will be coming back asking us to deepen that canal?

Mr. DAVIS. May I answer that from a personal standpoint? I personally would unquestionably suggest that if the canal is going to be built it be a sea-level ship canal; but a sea-level ship canal would require some time for its construction, and could probably not be completed in time to be available as a war measure; whereas a small barge canal will make available this transportation which will help during the war. The only figures we have are for an 8-foot lock barge canal. I fully agree with you that if you build an 8-foot canal we will be back asking you to deepen it. If you build any canal, there is certain to be an agitation to eventually make it a sea-level canal.

Mr. KENNEDY. What is there to get the coal into the vessels?

Mr. DAVIS. The Cumberland Sound.

Mr. KENNEDY. What is there in the way of facilities on the sound?

Mr. DAVIS. Very little.

Mr. KENNEDY. Their terminals would have to be constructed.

Mr. DAVIS. Yes.

Mr. KENNEDY. What cities are there on Cumberland Sound?

Mr. DAVIS. The city of Fernandina on the Florida side has 3,000 to 5,000 people. The city of St. Marys on the Georgia side has about a thousand people.

Mr. KENNEDY. That means that the Government would have to build the docks.

Mr. DAVIS. The coaling docks, yes.

Mr. KENNEDY. Because a town of that size could not do it.

Mr. DAVIS. I think the State of Georgia would utilize its own property and probably invest largely in docks, wharves, and warehouses on the land owned by it, which is peculiarly suitable for these purposes. The State of Florida might take similar action as to the land it owns.

Mr. KENNEDY. But to provide facilities for handling the coal would require a large sum of money?

Mr. DAVIS. Yes; but there is a very peculiar situation in that particular section. Within 40, 50, to 60 feet of the shore you get your required depth. The depth is easily anywhere between 40 and 60 and 80 feet. Of course, there are bars that would have to be removed; but from the standpoint of dry docks and the required facilities for ships you can build one row of piling out 40 or 50 feet from the shore

and you can there get a depth at which you could dock the *Leviathan*; and you have 100 miles of just such water front available.

Mr. KENNEDY. But where you have got to provide warehouses for other commodities besides coal it is expensive.

Mr. DAVIS. The United States has appointed a committee to find some ports where they can relieve the congestion up in the North.

Mr. KENNEDY. They are through with their work, are they not? I saw a statement referring to a report and supposed it was after this commission had made its investigation.

Mr. DAVIS. I was told at the Shipping Board yesterday that they were still on their trip.

Mr. CLEARY. Are there any railroads running down from the present coal fields on the Atlantic coast to where you are proposing to carry this coal?

Mr. DAVIS. Not directly. There are some, yes; but there is not a very direct route, and you must remember that the United States has been developed against nature. When you cross from the seaboard to the Mississippi Valley you have got to cross a great natural barrier, and the cost of transporting is very great, whereas by utilizing the watercourses and the force of gravity you should have the cheapest transportation.

Mr. CLEARY. The history of canals is that you constantly have to have more water in order to be able to carry larger ships. How deep is that canal to be?

Mr. DAVIS. Nine feet. I absolutely agree with you that we should have a deeper canal, but I am unable to use any other figures or estimate cost on any other basis than that which the engineers used.

Mr. CLEARY. They have closed up the old coal canals.

Mr. DAVIS. The governor suggested to me that the building of this canal would drain the Okefinokee Swamp. Of course, if this is built as a lock canal it will drain it, but it will not dry it up, because the locks in the canal would hold the water back. The building of this canal would drain and make available a large proportion of the prairie land in this swamp, which is very rich.

Mr. KENNEDY. Is it owned by the State?

Mr. DAVIS. No; by a big lumber company. Neither I nor any of the gentlemen present own any of this swamp land or any stock in the lumber company. If a sea-level canal were made it would dry the swamp.

On the coal question I want to call your attention to a map issued by the Fuel Administration showing the restricted area in the north-eastern section of the United States, where the location of new industries is discouraged. This chart contains a legend, saying in effect that any industries which are to be established in this restricted district of New England, a part of New York, part of Maryland, and all of Delaware, must get their coal supply from the coal furnished the existing industries; which means you can not establish any new industries in that restricted area.

In the second place, I made the statement that this canal could be built in 12 months. I am reading from the reports of Col. Gillmore, to which there is a prefix by Maj. Robert Gamble, a distinguished engineer, of Tallahassee, Fla., which says, on page 25:

These dredges of the capacity of the *Appleton* and the *New York*, starting on the lower level of St. George Sound, and on the higher level of the *Wakulla*,

and the third or Wacissa level, covering 70 miles or more, and starting also in the Okefinokee Swamp, and in these levels working east and west—supposing them to be of the capacity of the *Appleton*—eight of them would dredge a mile per week of the canal bed, while eight such dredges as the *New York* would require less than one year to complete the excavation of the 144 miles. The excavation along the line from St. George Sound going west, consisting of cutting through lowlands which separate the several bays and other sheets of water to the Mississippi Sound, would also be dredge work as nearly as follows.

Mr. KENNEDY. Where are you going to get the dredges?

Mr. DAVIS. I should imagine they would use what is available from the Panama Canal. Other dredges might be taken from the machinery with which the State of Florida has been building canals.

Mr. CLEARY. What do you do with the material?

Mr. DAVIS. Pump it out on the side. As a matter of fact, I went up into this swamp. About 20 or 30 years ago a gentleman named Mr. Henry Jackson (and I think Senator Hoke Smith was associated with him) went into that region to get our lumber. They started to build a canal to drain the swamp into the St. Marys River. They completed this canal for some 10 or 15 miles, including that portion in the swamp. Their money gave out, but if they could have dug it for a mile or two farther, the swamp would now be dry. They have one cut 25 feet deep. The material does not wash back into the canal; you can dig it out with your hands. It is a soft sandy loam. I went up that canal 8 or 10 miles in a motor boat.

Mr. KENNEDY. Have you talked with the Engineer's Office about the dredging proposition?

Mr. DAVIS. Yes, sir.

Mr. KENNEDY. You had that matter up with them?

Mr. DAVIS. I talked to the Inland Waterways committee, of which Gen. Black was chairman, and Gen. Black made the statement that he did not think the machinery from Panama would be available.

Mr. KENNEDY. We were given to understand last year that there were no dredges that could be secured to aid in dredging Mobile Harbor. I took it from that that it would not be possible to find dredges for this work.

Mr. DAVIS. I judge from what Gen. Black said that there would be very little machinery available from the Panama Canal. Anyway, I understand they could use the Florida dredges. In this statement Maj. Gamble says that you can dig the canal in one year if you use eight dredges.

There was a report issued in 1913 on the question of building a canal across Florida, and that report suggests five alternative routes. I want to get this in the record, because the other day when this matter was mentioned Senator Ransdell asked if there was not a later report in which it was stated that the Okefinokee route was not desirable because the water supply was precarious. The paper to which he referred was this report called "An intercoastal waterway across the Florida section," and I will read from this report. It deals with five routes and eliminates all except the fifth and says that the fifth is undesirable, or there is no justification for it, and the conclusion of the report is that there is no reason for this canal across Florida. Now, however, on one point it says, in regard to the Okefinokee route:

The standing water in the swamp is entirely insufficient for the water supply of an important canal.

That statement is based on the reports of Col. Gillmore made in 1876 and 1880. I am going to read what the Gillmore report actually says. He says, on page 55:

I therefore assume that it has been abundantly proven that there is a sufficient volume of water collectible along the line of the summit level to operate the largest ship canal that the commerce of the country is likely to demand in many years to come. I have reason to believe that a much greater surplus of water than has been here shown will be found to exist. Should this canal or any similar one be excavated along or near this line, infiltration alone will be found to be a very important factor in the water supply.

That statement was made when he was considering a canal 240 feet in width and 24 feet deep, a ship lock canal. The two canals then considered were an 8-foot lock canal and a 24-foot lock canal.

Mr. CLEARY. And that includes the lake and rivers?

Mr. DAVIS. There are available the St. Marys River for 61 miles, then the lakes in the swamp, then the Suwannee for 50 miles. The Suwannee and several other rivers would be turned into the channel.

Gov. DORSEY. I will ask only three more minutes from Mr. W. T. Anderson, chairman of the executive committee of the Mississippi River, Gulf & Atlantic Canal Association, and then we will adjourn.

STATEMENT OF MR. W. T. ANDERSON, CHAIRMAN EXECUTIVE COMMITTEE OF THE MISSISSIPPI RIVER, GULF & ATLANTIC CANAL ASSOCIATION.

Mr. ANDERSON. Mr. Chairman and gentlemen, it is not my purpose to occupy more than two minutes. The thought has been brought out here that the canal should be constructed as a war measure. We presented those arguments as to why it should be done at this time because of the immense importance it will be to the Government in the event the project is entered into now. However, in addition to this thought, I think we should take cognizance of its value as a commercial proposition after the war. Trace a line or just observe that map showing the drainage basin of the Mississippi River. You will see that this basin embraces 18 States of the Middle West and the South. There are 36,500 industries in the 7 Southern States which would naturally use this proposed port of St. Marys, and all of the industries in the 18 States of the Mississippi Basin would use this canal in connection with the Mississippi River as the cheapest means of transportation in the world if they were enabled to do so by bringing that River to the Atlantic Ocean through this proposed canal and utilizing on the Atlantic, at St. Marys, one of the best natural harbors in the world, where all shipping could be within 20 minutes of the open sea.

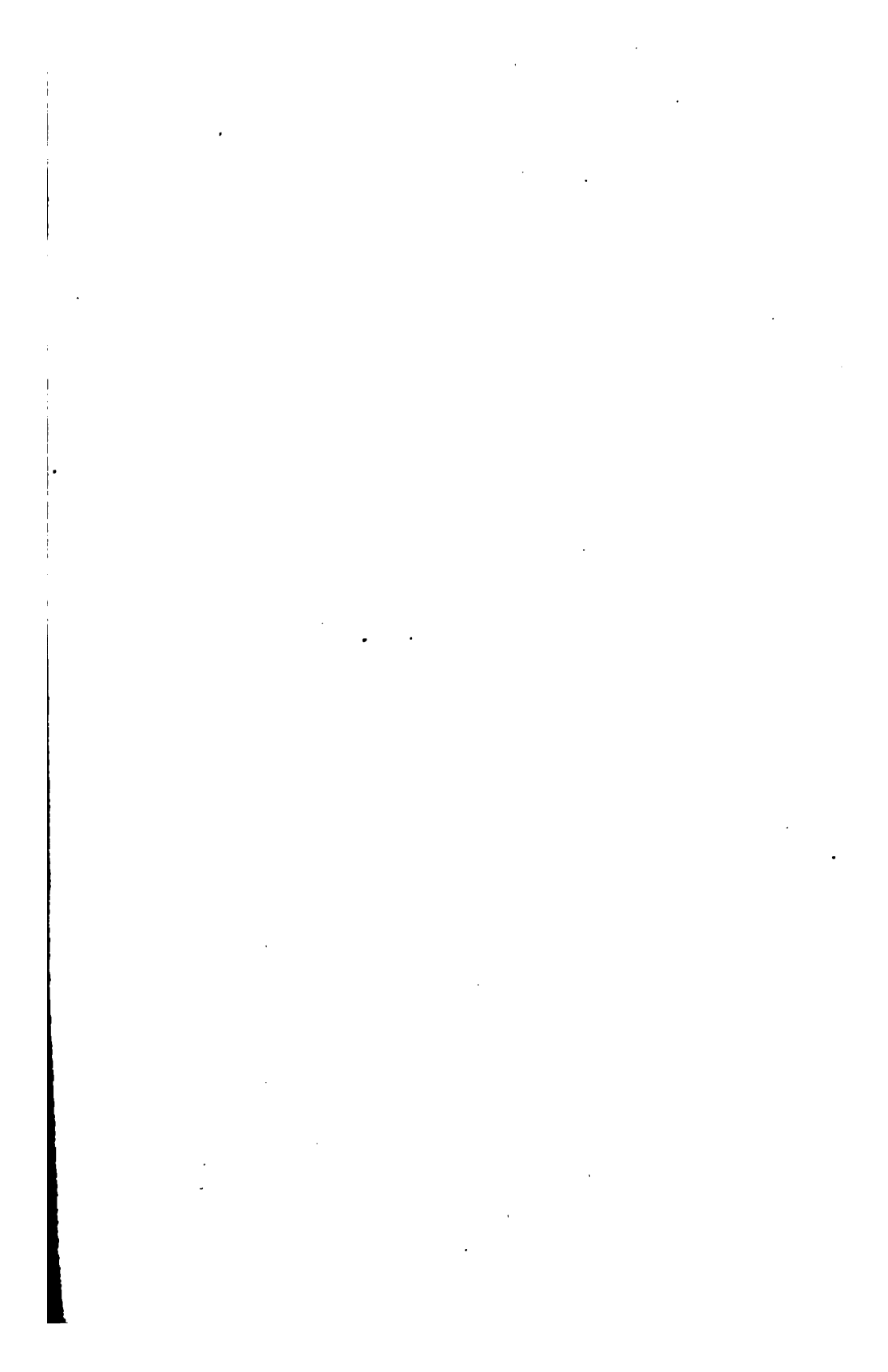
Imagine what our condition is going to be in this country when the war is over. We must have an additional opening or port, a large freight and coaling station for future war purposes and also to handle the entire peace-time trade of the Pacific Ocean. If this canal is built, it will make available a port for all of the freight going into and coming out of the Mississippi River basin and all of the shipping that passes along the Atlantic seaboard, either going through the Panama Canal and into the Pacific Ocean or down the east coast of South America. We shall have the biggest merchant marine the world knows when the United States finishes its shipbuilding pro-

gram, and we should not wait until the day dawns when we shall find still further port congestion in this country. This is one of the arguments I think should be kept in mind; and, further, the ports on the Gulf of Mexico and the entire trade from Texas and the great Middle West ought not to have to go around the peninsula of Florida and up the Atlantic coast, 1,100 miles waste travel, before it gets to a point opposite New Orleans on the Atlantic seaboard.

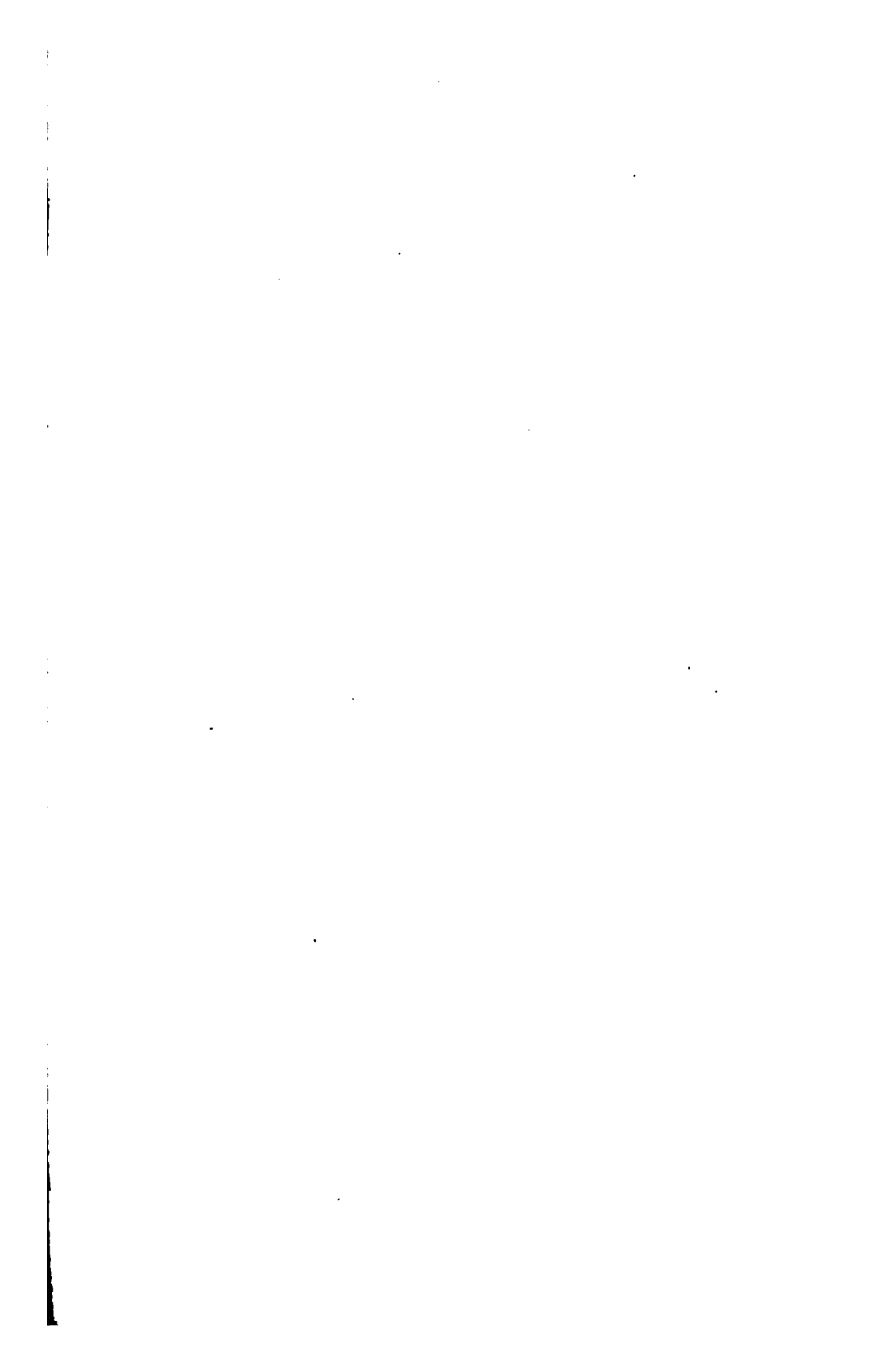
I believe that a sea-level ship canal is the one that must be constructed, and I think that thought should be stressed with the committee; also, that there is good, hard common sense in the argument that this can be made available for war purposes at this time, and I earnestly trust that you will take cognizance of this feature.

The CHAIRMAN. The hearing will now be adjourned.

(Thereupon, at 12 o'clock m., an adjournment was taken.)







11

GALVESTON HARBOR, TEXAS

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF GALVESTON HARBOR, TEXAS

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
POW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 24, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

GALVESTON HARBOR, TEX.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Thursday, January 24, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order. Mr. Gregg wants to be heard upon a new project at Galveston Harbor.

STATEMENT OF HON. ALEXANDER W. GREGG, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS.

Mr. GREGG. We are appearing before the committee this morning in behalf of a 35-foot project at Galveston, in Galveston Harbor.

The CHAIRMAN. We have only a proof print. Will you read the final paragraph in the Chief of Engineers report there?

Mr. GREGG. Yes; I will read this. That is about all I was going to say anyway. They do not recommend the 35 feet, but they recommend an experiment to see if we can obtain it.

The CHAIRMAN. It is the last paragraph of the Chief of Engineers report.

Mr. GREGG. Gen. Black says:

After due consideration of the above-mentioned reports, I concur generally in the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore, recommend dredging the entrance channel to a depth of 35 feet at mean low water and 800 feet wide, at an estimated cost of \$65,000, to be paid from funds in hand—

The money is there, available for the purpose:

and the maintenance of this channel for a period of two years at an estimated annual cost of \$30,000, and that report be then made to determine the advisability of permanently adopting these dimensions.

The further improvement of Galveston channel, with a view to obtaining a navigable depth of 35 feet, is not deemed advisable at the present time.

The part between the jetties the engineers call the harbor, and the portion along by the wharves is called the channel, and the last sentence refers to the channel there. That is an estimate, and this experiment, this test to be made, is really over the bars in the harbor, between the jetties, and they think that we ought to have this, if it has been unanimously favorably reported upon by the local engineer and the district engineer and the Board of Engineers for Rivers and Harbors and by the Chief of Engineers. As this is simply the report and as the committee got this advance sheet, I borrowed it from Mr. Small. That is all that has been printed on it. The truth of the

matter is that that is the whole thing right there; anyway, in that sentence I read.

Now, Col. Gresham will be able to give any details that are desired. It is purely an experiment, and it is intended to make the effort with the money on hand, and try for two years, and if it is practicable to do it by dredging then the question will be passed on by them again. This is a proposition to do it by dredging and not by extension of the jetties. Extension of the jetties would be a pretty big proposition, but this is simply to make this with the money already on hand, to see if 35 feet can be obtained and maintained, and they want two years to test it in.

Now, gentlemen, I will introduce Col. Gresham to you, who is about as familiar with the project down there as he is with his A B Cs, or even better than his A B Cs.

STATEMENT OF COL. WALTER GRESHAM, GALVESTON, TEX.

Col. GRESHAM. This is the third effort we have made to get the Government to establish the project for 35 feet. The first report of the engineers recommended the extension of the jetties at an estimated cost of about \$10,000,000. That was rejected on the ground that the traffic at that time was of such a character as not to justify the Government to go to that expense.

Mr. GREGG. That was on account of not having dead-weight—

Col. GRESHAM. That was on account of not having dead-weight cargoes. The project was recommended then on the basis of the cotton cargo exclusively. They rejected that, and we came again and asked for another survey. That was granted by Congress, and in the second survey I think they recommended the extension of the south jetty at an estimated cost of something over \$2,000,000—I do not remember the figures. This, too, failed to pass.

In the meantime there was a diversity of opinion among the Army officers as to whether or not the 35 feet could be obtained and maintained by dredging simply. Some contended, as Capt. Oaks at that time did in his report, that it was necessary to extend the jetties, while other members of the board here contended that they believed it could be maintained, among whom was Col. Taylor, who maintained that it could be obtained by dredging at a comparatively small cost.

Now, I take it that this report which Mr. Gregg read, and which I had the privilege of reading when I was here some time in December, seems to be carrying out the idea as an experimental one, there having been a diversity of opinion among the Army officers as to whether it could be obtained and maintained by simply dredging.

Now, this recommendation of the engineers, I take it, simply means that with the money on hand we could now have the privilege of trying the experiment of obtaining and maintaining the 35 feet, simply by dredging. I think that is the whole issue before the committee to-day, and the money is on hand for that purpose.

Now, there never has been a time in the history of the port when 35 feet has been as much needed as it is to-day. Heretofore many of the steamers that came there were tramp steamers—I do not say the bulk of them, but a great many of them, because we had, the

Leland Line, the Harrison Line, the North German Lloyd, and other regular liners that came there. Now we have the Leland Line. Others may come, too, but I happen to know of the Leland Line particularly, because most of its steamers draw 33 feet of water, and have come in there several times recently, and could not load below 31 feet. As you all know, when a vessel draws now a heavy draft, it becomes a matter of great importance on account of the freight rates that have to be paid, and the cargo it has to carry. One of these vessels, as I told you, loaded the other day. She loaded to 31 feet, and the agent told me that for every inch of water that that vessel drew it meant 60 tons of additional freight to the cargo. If a vessel could get 15 inches or 20 inches more at 60 tons per inch, at freight rates as they are to-day, you can readily see what a tremendous loss that is to us, and that is principally the character of vessels that come there now, because the war has taken off the great bulk of the tonnage which used to handle the crops that came through that port.

We hope that this committee will carry out the engineer's recommendations, particularly in view of the fact, as he states, that we have the money on hand with which to do it, and it certainly will be a great assistance to us. I do not know that it is any particular secret, but I have gotten the information, and I think from a reliable source, that the Navy Department is having an examination made with a view to 40 feet there now.

The CHAIRMAN. The project depth over the bar, and between the jetties, and also in the channel leading up to the side opposite the piers, is 30 feet?

Col. GRESHAM. Thirty feet; yes, sir.

The CHAIRMAN. But the report states, as I recall, that there are about 32½ feet there to-day?

Col. GRESHAM. Yes, 32½ feet.

The CHAIRMAN. Now, you can explain, and I would suggest that you do so, the necessity of 35 feet over the bar, with only 30 feet in the channel leading up to the piers?

Col. GRESHAM. In the first place, the channel really has 35 feet, because they have the dredge there, and while the project is 30 feet, in order to maintain the 30 feet depth they have dredge to 33 feet. That is the condition to-day; and while we are asking nothing, they have, besides the appropriations for digging that channel there, and the location of the piers being toward the harbor, the east end of the improvement is where the deeper vessels go to get their load, and it is but a short distance out from that place to the harbor. Take this *Indian*, of the Leland Line, that I spoke to you about a moment ago. It went into pier 10 and commenced loading, or, at least, was about to commence loading, when it found that there was not quite water enough there to load it to the full capacity that it would draw, if it wanted to get over the bar, and they at once put a dredge in to clean out that slip to the depth, I think, of about 32 or 33 feet—I do not remember the exact depth—because of the value of the space that that vessel would carry, as I have just told you, and she went out loaded between 31 and 32 feet—I do not know—I think 31.5—I do not remember—but they had to take advantage of the tide.

As I said before, it is of vital importance to use at this particular juncture to get this, because the smaller vessels do not come there,

and we hope that, as the money is on hand and the Government engineers are evidently experimenting in this matter, that you will carry out the recommendations of the Board of Engineers.

Mr. DUPRÉ. I do not think Col. Gresham quite caught the import altogether of your question. You wanted him possibly to explain the reason why it was necessary to have a greater depth over the bar than in the channel. There is a perfectly good reason, and I wish you would explain it to the committee, the necessity for the greater depth over the bar than in the channel. Why is that so?

Col. GRESHAM. Well, in the first place, the water over the bar is much rougher, and the tide conditions are such as to require a greater depth than in the still water.

Mr. DUPRÉ. Some of us think, after your long experience in these matters, you are about as good an engineer as some of the members of the Engineer Corps of the United States Army.

Col. GRESHAM. Thank you, sir. I do not think I deserve that, however.

Mr. DUPRÉ. What do you think of the practicability and the feasibility of this experiment? What is it going to develop? Is it going to prove successful?

Col. GRESHAM. It is going to develop the obtaining and the maintaining of 35 feet, and I get that because every engineer that has studied the subject down there thinks the same thing. Col. Taylor made the remark to me once, after the jetties had been completed, that he believed that with the use of the dredge *Galveston* which had at that time been constructed by the Government for the dredging out of the harbor, that he could do it in 90 days. Col. Riché, who was there a good many years, and whom I regard as one of the brightest men in the corps, says that he has no doubt that it can be obtained and maintained there by dredging within a comparatively short time, and I think that the report, although I have not seen it, fixes the time when that can be dredged out at about six months.

I will be glad, gentlemen, if I can answer any questions. I do not know that there is anything I can say in addition to this. If there is any question that you desire me to answer, I will take pleasure in doing so.

Mr. FREAR. They have commandeered a great many of the boats down there, have they not?

Col. GRESHAM. Yes, sir; very nearly all. We get very little shipping.

Mr. FREAR. The question which has come up on these new projects is whether or not it is an immediate necessity.

Col. GRESHAM. Well, it is, for the reason that the character of vessels, as I have said awhile ago are of much larger draft than they used to be. We had one load there the other day, the *Indian*, belonging to the Leland Line.

Mr. KENNEDY. I see here in the report that one drew 29½ feet.

Col. GRESHAM. Well, one of the Leland Line boats that went out the other day drew, my recollection is, 31.5. That is what the agent told me.

Mr. FREAR. The first recommendation in the report is for 33 feet, from the chief local engineer and also by the district engineer. There is not much difference between 33 and 35.

Col. GRESHAM. I think they have changed that recommendation to 35.

Mr. FREAR. The board does, but I am speaking about the original recommendation which appears back in the paper. But there is not much difference, of course, and it is a small expense.

Col. GRESHAM. I would like to follow the engineers, instead of the local board.

The CHAIRMAN. I would just like to ask you this: Of course, Galveston is a great harbor and under normal conditions has a much greater commerce than appears now and ranks with New Orleans as one of the two great harbors on the Gulf. Those of the committee who were so fortunate as to visit Galveston took a great deal of interest in the terminals there.

Col. GRESHAM. Yes, sir.

The CHAIRMAN. There are quite a number of terminals, all privately owned, so far as I recall.

Col. GRESHAM. Yes, sir.

The CHAIRMAN. And one of the terminals seemed to be constructed according to modern plans and had rather fine facilities for transferring freight between the ship and the warehouse. What is your opinion as to the probability at any early date of Galveston adopting a modern municipal terminal, properly located and also connected with the railroads there?

Col. GRESHAM. They are connected now, except in one little instance.

The CHAIRMAN. I should have said, as far as I observed, all of those large privately owned terminals are connected with the railroads, but the thought in my mind is that as great a harbor as Galveston, having so large a commerce and being the gateway to the sea—the immediate gateway to the sea, at any rate—for so large an area of distribution, ought to provide a municipal terminal owned and controlled by the city.

Col. GRESHAM. Well, that opens a large field for discussion as to whether it is best for the terminals to be owned by the municipality or whether they should be owned by private corporations, controlled by the State railroad commission and the Interstate Commerce Commission. The railroad commission of Texas fixes the rates of those terminals there. The city does not. Now, for myself, I would rather have the terminals at Galveston, knowing the local conditions as I do, controlled by the State than controlled by the municipal authorities.

Mr. BOOHER. Colonel, right there, suppose you had municipal wharves down there, would the State fix the rate of charges on your municipal wharves?

Col. GRESHAM. Yes, sir.

Mr. BOOHER. It would then be in the hands of the State as well as the privately owned wharves?

Col. GRESHAM. Yes, sir; I take it so. That is a question of law that would have to be decided.

The CHAIRMAN. You refer to these privately owned terminals; are they all regulated by law as to charges?

Col. GRESHAM. They are regulated by the railroad commission. The charges are all fixed.

The CHAIRMAN. Is that under a law by which the State commission directly regulates them, or under a law authorizing the municipality to impose regulations?

Col. GRESHAM. No; it is done by the State; done by the railroad commission. Now, let me make a little explanation there, because the method of collecting tolls at Galveston is different, I think, from any place I know of. The charges are made directly upon the commodity that passes over the wharves. It is a direct charge on the commerce. Now, at most ports, the charge is made upon the vessel that comes in, and that makes a difference. Now, in the aggregate, I am told that the charge, by being made directly upon the commodity, instead of upon the ship, works out to about the same thing, very nearly the same thing.

The CHAIRMAN. Tell me how this would work. Suppose the ship came in with a cargo consigned to some person or corporation which did not own its own terminal. What would be the disposition of that ship?

Col. GRESHAM. It would take its course and be assigned by the harbor master to a berth in due order.

The CHAIRMAN. That means it would be assigned to some private terminal?

Col. GRESHAM. No, sir. All of them are private in one sense.

The CHAIRMAN. Privately owned, I mean.

Col. GRESHAM. Privately owned. All of them are that way. There are a great many wharves, but there is only one of them that I know of that is really monopolized by any one company. That is the one used by the Mallory Steamship Line.

The CHAIRMAN. Supposing a ship came in with a cargo consigned to some one not owning a terminal, would not those privately owned terminals have the right to decline to grant the use of their terminal to that ship?

Col. GRESHAM. No, sir. As I say, there is only one that I know of, and that is the Mallory Steamship Line, which is occupied all the time with freight. That is the only pier of the 5 miles of wharf facilities there that is exclusively occupied by any one company.

The CHAIRMAN. To whom would that ship apply, or to whom would the consignee apply for the privileges of terminal facilities?

Col. GRESHAM. He would apply to the harbor master, and he would assign the ship to a pier, because the company makes no distinction whatever.

The CHAIRMAN. Has the harbor master the authority to assign that ship to a pier, regardless of the wishes of the owners of the pier?

Col. GRESHAM. I think the owners concur in that. I never heard of any conflict in that respect, sir.

The CHAIRMAN. Then the owners of the pier would have the right, if they chose to exercise it, to decline the use of their pier to that ship?

Col. GRESHAM. I do not think they can do that under the laws of our State and the regulations of the Interstate Commerce Commission.

The CHAIRMAN. Will you examine that some time?

Col. GRESHAM. Yes.

Mr. FEAR. When we were in Houston, Colonel, we saw the large municipal piers there, and one of the things urged in their favor was

that they gave equal service to all who applied, and a distinction was drawn between conditions there and in other cities. Do you know what the cost is or the charge is in Galveston as compared with the charge in Houston for the same service?

Col. GRESHAM. No; I could not answer that.

Mr. FREAR. What would be the possibility, or on what basis can Houston compete with Galveston, unless it is that they furnish wharf facilities at lower rates?

Col. GRESHAM. We do not think they do compete.

Mr. FREAR. I was going to say that it is such a long distance up that channel that they would have to bring the vessels that I was wondering whether you can tell us how they can bring those vessels up there and handle them successfully, in view of the fact that Galveston is so much nearer the sea and so much more convenient, unless it is a question of wharf facilities?

Mr. DUPRÉ. Are you here fighting Houston or helping Galveston?

Col. GRESHAM. I am not here to fight anything in Texas.

Mr. FREAR. I am trying to get an answer to my question, Mr. Chairman, as to whether or not the fact of their having municipal wharves is an advantage?

Col. GRESHAM. I will give you Mr. Huntington's answer to me on that very question. He says:

I can take my freight already loaded on my cars on down grade 45 miles to my terminals at Galveston cheaper than I can pay the additional pilotage, towage, insurance, and demurrage on my vessels going up there if you give it to me for nothing.

Mr. FREAR. Why do they go up there?

Mr. DIES. He must have told you before these improvements were made, because he died before that.

Col. GRESHAM. Of course he died before that, but the same conditions as to the charges exist to-day.

Mr. FREAR. They have some wonderful terminals there.

Col. GRESHAM. There is no doubt about that, and they deserve a great deal of credit. They spent a great deal of money on them.

Mr. FREAR. I was wondering what the purpose was to have them under the municipality, unless there is some benefit to the shipper in charges or service.

Mr. SWITZER. It would save some railroad haul, would it not?

Mr. FREAR. Is there any difference in the cost of the railroad haul between Houston and Galveston and interior points?

Col. GRESHAM. I think so; I think there is a differential, but that differential that the railroads have received does not equal the four charges that I have mentioned on the vessel going up there.

Mr. FREAR. I see.

Col. GRESHAM. That is the point I was making. Now, I do not want it understood that I am trying in any way to make little of Houston's efforts.

Mr. FREAR. I was very careful not to suggest that in my question. I simply wanted to know the advantage of municipal wharves, as compared to privately owned wharves, if there is one.

Col. GRESHAM. Houston has gone ahead as steadily as we have gone down, particularly since the war, and they are making every effort, and rightly so, to give all the facilities and inducements that

they can to have commerce come there. Whether they will succeed after the war is problematical. I do not know; I do not believe they will.

Mr. FREAR. I may have understood incorrectly, discussing it with some of the people there at that time, but I understood that they had practically the same freight rates or you had practically the same freight rates that they have, and this suggestion was presented to me at that time, that there ought to be a greater charge to Galveston in favor of Houston, because of the shorter haul, and I was inquiring of you if that was the fact, as I understood it.

Col. GRESHAM. As I understand, they get very few, if any, ships except, I think it is the Mallory Line, perhaps, that runs a ship there every month from Philadelphia up that channel. They have not had, to my knowledge, any foreign vessels of any importance to go up there. You see, that channel is 150 feet wide and 25 feet deep, and an ocean-going vessel does not like to go up a channel, particularly when there are 20 or 30 miles of that channel that is in an open bay that you can not see from one side to the other, and where they are liable at any time to be driven ashore across such a narrow channel, and they do not like to go up there.

Mr. FREAR. Then, what would be the inducement for them to go—I mean in a monetary sense, dollars and cents—if this question of wharfage was not an important element?

Col. GRESHAM. Well, if they paid all the other charges when they got up there, that might be an inducement for them, but I do not think they have gone up there yet.

Mr. FREAR. Unless I am mistaken, that is the situation there; that for shipments made from Kansas City, or points that are interstate, Houston gets the same rate that you do, or you get the same rate that Houston does, and it is only for the more local traffic where the additional charge is made to Galveston. That is my recollection, and if that be so, of course, Houston is a competitor, an even competitor with you on certain classes of freight that come in on the cars.

Col. GRESHAM. Mr. Frear, the commerce there has been so small that it is hardly possible to tell what can be accomplished.

Mr. FREAR. You mean Houston?

Col. GRESHAM. Yes, sir; it would be difficult; it would be merely a conjecture.

Mr. DIES. About 1,000,000 tons, is it not?

Mr. KENNEDY. One hundred and sixty-seven thousand six hundred tons in 1916.

Mr. DIES. Just half of the Galveston tonnage.

The CHAIRMAN. Colonel, I will not bring Houston into contrast with Galveston, except to say that I think the citizens of Houston have shown a very commendable spirit.

Col. GRESHAM. There is no doubt about it. We all applaud them for it.

The CHAIRMAN. And Galveston may have to look to its laurels, but pursuing the question of terminals at Galveston, suppose some individual or company or corporation should wish to establish a shipping business at Galveston which would require them to use the shipping facilities of the port, would they not, under present conditions, be under a disadvantage, compared to those individuals and corpora-

tions engaged in a similar line of business which did own their terminals?

Col. GRESHAM. I do not know about Houston, because—

The CHAIRMAN. I am not speaking of Houston; I am speaking of Galveston.

Col. GRESHAM. Galveston? Well, there are none—there are only two corporations there, one the Galveston Wharf Co. and the other the Southern Pacific Co., and there is no privately owned wharf except by those two corporations.

The CHAIRMAN. But all of the terminals, according to my information, on the city front there, are privately owned.

Col. GRESHAM. They are.

The CHAIRMAN. None of them publicly owned.

Col. GRESHAM. No; not public.

The CHAIRMAN. We will accept that as a fact, and I am asking, repeating the question, if an individual or corporation desired to come to Galveston and engage in a business requiring shipping facilities, and the use of the port, would it not be at a disadvantage, compared with those who own their own terminals, water terminals?

Col. GRESHAM. I do not know whether they would or not. I do not know how that would be, but as I say, the only wharf that is monopolized exclusively by any one company, and I presume that is under a lease—I do not know—is the Mallory Steamship Line Co.

The CHAIRMAN. Is it not true that those individuals and corporations which own their own terminals do enjoy an advantage? Is not that obvious from the fact that they have made the expenditure necessary to construct their own terminals?

Col. GRESHAM. Well, there is none of them that did that.

Mr. SWITZER. Mr. Chairman, allow me to suggest that, as I understand it, there is nobody in the producing business down there that owns his own terminal. The people he has in mind that own the terminal facilities are engaged in that sort of business, and they are under State regulation; is that it?

Col. GRESHAM. Well, as I say—

Mr. SWITZER. What I want to know is this: Are the people who own the terminals necessarily engaged in some other business that produces products that monopolize the terminals?

Col. GRESHAM. No; the owners of the Galveston Wharf Co. are scattered all over the world, of that corporation.

Mr. SWITZER. They own the terminals?

Col. GRESHAM. They own the terminals.

Mr. SWITZER. And they are engaged in receiving the products from all over the world from wherever they may come?

Col. GRESHAM. Yes, sir.

Mr. SWITZER. And they are regulated by the State?

Col. GRESHAM. Yes, sir.

Mr. SWITZER. So they are not necessarily monopolized by any one producing company?

Col. GRESHAM. They can not monopolize it.

Mr. GREGG. The wharf companies maintain and operate these wharves for the benefit of the public. They can not compete in any way.

Mr. GALLAGHER. Do you not believe it would be an advantage to Galveston to own its own terminals?

Col. GRESHAM. I do not, sir.

Mr. GALLAGHER. I do not think this committee ought to spend a dollar for improving a channel where the city has not provided a terminal. It is a fact that an independent vessel going into Galveston, and not having wharfage privileges, is at a disadvantage with others that have their own terminals.

Col. GRESHAM. I do not think so.

Mr. GALLAGHER. I think so. It is so everywhere. The man who owns the terminal privilege is going to take advantage of it.

Col. GRESHAM. But they do not do it there; neither the city nor the State would permit it.

I want to show you all the facilities we have. I have a map which will show it. If the facilities which we have are not sufficient, the Southern Pacific can improve them by extending their property west which they own.

Mr. GALLAGHER. They own the whole front?

Col. GRESHAM. Oh, no; the Southern Pacific have improved about one-half of their property there for about 1,500 feet of frontage. They own a little over half a mile of frontage. Here is the Santa Fe's property on the east end, right east of the Wharf Co.'s property. If the Wharf Co. made exactions or extortions upon the public that affected the people whose property the Santa Fe Railroad Co. handles, that company would improve its property, and they are preparing to do that now, just as soon as this sea wall is completed.

Mr. DIES. What are the wharf companies' properties valued at?

Col. GRESHAM. Well, my impression is—and I will not speak positively—is that they are valued somewhere in the neighborhood of \$10,000,000.

Mr. DIES. What is their gross income annually?

Col. GRESHAM. I could not tell you. I think they pay a dividend upon about two millions of stock. I think they pay a dividend of 5 or 6 per cent.

Mr. DIES. On \$2,000,000 of stock?

Col. GRESHAM. Yes, sir. These are just merely my impressions. I can not speak accurately as to the amount.

The CHAIRMAN. Colonel, I would like to make this statement for your consideration, and through you and Mr. Gregg, of the commercial interests of Galveston. It appears that all of the water terminals at present existing at the port of Galveston are privately owned.

Col. GRESHAM. All improved terminals.

The CHAIRMAN. All improved terminals.

Col. GRESHAM. Yes, sir.

The CHAIRMAN. But that they are under State regulation as to their charges. It does not appear definitely whether there is any authority of law requiring them to give the use of those terminals to any ships or shippers upon equal terms, but in so far as you have State regulation as to charges, that, of course, is an improvement over privately owned terminals without any such regulation, but I do suggest to you, and to the commercial interests of Galveston, that you give study to the question of the necessity of publicly owned, at least one large, well-equipped municipally owned terminal there in the interests of your commerce.

Col. GRESHAM. Well, now, I know the situation that has developed since I have been in here. The city of Galveston owns Pelican Island, which is north of the wharf company, the improved wharf company's property.

The CHAIRMAN. Does it own it entirely?

Col. GRESHAM. Owns it entirely. They own the whole of that property north of the Wharf Co.'s property. The Southern Pacific owns all the frontage there, and the Santa Fe there.

The CHAIRMAN. But there has been no development on Pelican Island?

Col. GRESHAM. No development of that sort, for this reason, that the city of Galveston has a population of about 40,000 or 50,000 people, and it has a taxable value upon its property of about \$45,000,000, with a bonded debt of \$5,000,000. That has been caused by the storms there, which render it financially impossible for us at this time to go to work to improve the property on Pelican Island.

Mr. GALLAGHER. The chairman asked you in regard to the improved harbor frontage here at Galveston. Now, about the unimproved frontage. That is all railroad owned, is it not?

Col. GRESHAM. No, sir.

Mr. GALLAGHER. Except this Pelican Island on the Galveston side?

Col. GRESHAM. No, sir; it only comes down to here.

Mr. GALLAGHER. The Santa Fe owns there, and the Rock Island there?

Col. GRESHAM. No, sir; the Santa Fe owns over half a mile of front east of the Wharf Co.

Mr. GALLAGHER. The Southern Pacific there?

Col. GRESHAM. The Southern Pacific owns about 3,500 feet west of the Wharf Co., and the Rock Island 2,600 feet west of the Southern Pacific.

Mr. GALLAGHER. I think the railroads have got everything gobbled up there, the same as they have in every other port.

Col. GRESHAM. No, sir; I do not think that.

I am here now, Mr. Chairman, and if there is any way in the world in which I can throw light upon this subject I would be glad to do so.

Mr. DUPRÉ. This is what I want to suggest: That the chairman renew his request that you put in, if possible, the statute or statutes that give the railroad commission authority to fix the rates of these privately owned terminals. I question whether the colonel could do that, but I think it would be very advantageous for us to have that.

Col. GRESHAM. I will telegraph to the chairman of the commission and get his answer.

Mr. TAYLOR. Those statutes are here in Washington, that legislation.

Col. GRESHAM. No; hardly. I do not know. You may find most anything here, but the question is where you will find it.

The CHAIRMAN. We are very much obliged to you, gentlemen.

Col. GRESHAM. Mr. Chairman, at the suggestion of Mr. Dupré, I will wire to the chairman of the railroad commission to-day and put these questions to him, and when I get his reply I will notify you.

(See telegram from Allison Mayfield, chairman, Railroad Commission of Texas, printed as Appendix A.)

The CHAIRMAN. All right, Colonel.

Col. GRESHAM. I am much obliged to you, gentlemen.
(Whereupon the committee adjourned.)

APPENDIX A.

AUSTIN, TEX., *January 24, 1916.*

Hon. WALTER GRESHAM,
Care Ebbitt Hotel, Washington, D. C.:

The Legislature of Texas in 1911, at the regular session, passed a law conferring the power and making it the duty of the Railroad Commission of Texas to fix and regulate all wharf and terminal charges in this State, but the attorney general has advised us that it can only extend to strictly State traffic; and as the great volume of such traffic is interstate and foreign, it follows that the jurisdiction and powers of the Railroad Commission of Texas are greatly restricted, if not altogether nullified.

ALLISON MATFIELD, *Chairman.*

12

INLAND WATER TRANSPORTATION

HEARINGS

ON THE SUBJECT OF

INLAND WATER TRANSPORTATION.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES.

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

THOMAS J. SCULLY, New Jersey.

SAMUEL M. TAYLOR, Arkansas.

H. GARLAND DUPRÉ, Louisiana.

MARTIN DIES, Texas.

OSCAR L. GRAY, Alabama.

GEORGE K. DENTON, Indiana.

HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.

ROBERT M. SWITZER, Ohio.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

S. WALLACE DEMPSEY, New York.

HENRY I. EMERSON, Ohio.

HENRY Z. OSBORNE, California.

RICHARD P. FREEMAN, Connecticut.

JANUARY 25, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

INLAND WATER TRANSPORTATION.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 25, 1918.

The committee met at 10.30 a. m., Hon. Charles F. Booher (acting chairman) presiding.

The ACTING CHAIRMAN. Gentlemen, I am very sorry there are not more of the committee members here this morning but I think we might just as well commence. The hearing is to be printed and can be read. In the absence of Mr. Small I will take charge of this meeting this morning, and as you are aware, it was called for the purpose of hearing Mr. Goltra and Col. Keller, and if Mr. Goltra is ready we will proceed.

Mr. GOLTRA. I will defer to Col. Keller, and will talk last.

The ACTING CHAIRMAN. Very well; Col. Keller.

STATEMENT OF COL. CHAS. KELLER, UNITED STATES ARMY.

Col. KELLER. It is a matter of your pleasure. I would just as soon talk now or later. The invitation to appear before you came in the form of a letter from Congressman Small, in which he referred particularly to the work of the committee on inland water transportation of the Council of National Defense. I have come here not with any set speech, because I do not think that is what you want, and I have painful deficiencies as an orator anyway. My purpose in coming was to tell you in a familiar way, subject to interruption by you, whenever you see fit, what has been the history of our operations from the origin of the committee to the present time, and to give you an account of what we think we have done. With apologies for the form in which my remarks will appear, I will proceed, sir.

In the first place, let me say that the conception of the necessity for such a committee as that to which I have just referred, that conception was Gen. Black's, the Chief of Engineers, and it resulted. I think, very largely from a knowledge of the legislation creating the Council of National Defense, and under it the advisory commission of the Council of National Defense. If you will go back to the national defense act of 1916, you will find that under the law creating the Council of National Defense, there was also created an advisory body which was to have for part of its duties that of ascertaining the conditions and circumstances of the transportation systems of the country, and of advising the council and in turn the Government, through the Congress, of any deficiencies

in our transportation systems, including inland waterways. They were expected, of course, to advise of such remedies as might be necessary in order to cure the evils that were found to exist. When this legislation became familiar to the Chief of Engineers and the rest of us, and largely as the result of conferences with river interests in St. Louis last April, Gen. Black decided to recommend to the Secretary of War that a committee charged especially with fostering inland waterway navigation, would be a very desirable thing, and with the encouragement of the Secretary of the War, such a committee was eventually created by the Council of National Defense. The committee as finally constituted is perhaps more or less familiar to you, but to make the record complete I will name its membership, very briefly, indicating such special qualifications as each member was supposed to possess.

The chairman of the committee is Gen. Black, Chief of Engineers, and aside from a special knowledge of our inland waterways such as he may be supposed to have in the discharge of his duties and as a result of the experience of a lifetime, he has a very warm special interest in any practical plan designed to put these channels to real use. He, as every one else, is familiar with the steady decline in the use of inland channels, with the one exception of the Great Lakes, which constitute a special case. Gen. Black, having this special and deep personal interest in the matter, was very active in securing for the committee a suitable membership, and in naming the members he sought the advice, not only of those who are familiar with river improvement but those who are concerned with legislation on the subject. He got the advice of Judge Small, Senator Ransdell, Senator Fletcher, and many others who had special knowledge, and the committee as finally constituted represents the views of all those whom I have named and possibly of some others.

The committee consists of Gen. Black, as chairman; Mr. James E. Smith, of St. Louis, who is president of the Mississippi Valley Waterway Association. He, for obvious reasons, therefore, would be specially interested in the Mississippi River; but in addition he is one of a number of prominent gentlemen who for some time have been, with comparatively little success, endeavoring to promote the organization of a company to engage in the transportation business on the Mississippi River between St. Louis and New Orleans.

The second member is Mr. J. M. Sanders, who is engaged in the shipping business in New Orleans and who was associated with Mr. James E. Smith in this enterprise of which I have spoken. They have made investigations and procured all sorts of special data bearing upon their particular problem, but due to the financial difficulties occasioned by the war, they have hitherto been unsuccessful in interesting private capital to the extent necessary before actually engaging in the construction of a good fleet.

The third member is Mr. Walter S. Dickey, of Kansas City, who is at the head of the Kansas City Missouri River Navigation Company. He is probably as well informed in a practical way in regard to river transportation as any man in the United States.

The fourth is Capt. James F. Ellison, of Cincinnati, who for many years was engaged in river navigation, not only in this country but in South America and who has a very adequate knowledge of the

management of the kind of boats that have been operated upon the western rivers.

And we had as the representative of the Atlantic coast interests, Mr. George Bartol, of Philadelphia, who unfortunately died two or three months ago after rendering valuable service to the committee, and Mr. R. A. C. Smith, the former dock commissioner of New York City, who is especially posted in coastwise shipping and matters relating thereto.

The last member of the committee is Mr. Joy Morton, of Chicago, who has for years interested himself in such matters and was especially disposed to interest himself in the waterway connecting the Great Lakes and the Mississippi system.

I was assigned to duty as secretary of the committee, and I have been in fact its executive officer to the extent that the committee has definitely formulated its plans. The committee as thus constituted was a purely voluntary body—that is, the members served without compensation, and in the beginning they paid their own traveling expenses. It was not until several months after the organization of the committee that the Council of National Defense agreed to pay the traveling expenses of the members. Up to that time those of the members who are more prosperous contributed toward paying the traveling expenses of those members who were less able to make the sacrifice. We had no funds with which to operate and we had no agency through which to do such work as we planned to do, other than the district officers engaged in the work of improving the various rivers and channels with which we are attempting to deal. To the extent that we were without funds, without authority, and without any specific definition of our duties, we were, of course, limited in our usefulness. A specific mandate might have enabled us to perform our duties more satisfactorily on the whole. For a time it was, therefore, difficult to arrive at a definite decision of just what we should do. The problem was a large one. The territory was immense and the members of the committee themselves had not definitely visualized the situation.

But more or less informally we settled down into a recognition of the fact that our whole function should merely be investigative and advisory, and that in view of the fact that there were comparatively few waterways of the kind with which we were supposed to deal west of the Rocky Mountains, and of the further fact that our facilities for doing anything useful were circumscribed by the nature of the committee itself, we decided to limit our activities to the Mississippi system of rivers, including the two principal tributaries, the Missouri and the Ohio, and the Atlantic coast, the coastwise system of waterways, or intracoastal route as it is more generally known, including in that as a logical extension, the New York State Barge Canal. The latter is of course well known not to be a national improvement, but one that has been paid for by the State of New York, and yet on the other hand, it is so logical an extension of the intracoastal route and so near completion that it seemed desirable that we should consider it as far as we were able. The committee adopted this general plan of operations, and we therefore set our work in progress. In so doing, as I say, we acted through the local agencies of the Office of the Chief of Engineers, with some

assistance in the field from the members of the committee, and from one or two men who were specially selected for the work. Out in St. Louis, on the Mississippi River, we had as an assistant to the local engineer officer, Capt. Poland, and on the Ohio River, Col. Beach, who was the district officer at Cincinnati, had as a special assistant Maj. Stewart, of the Engineer Reserve Corps. Both of these assistants had been interested in river matters for years and were very intelligent and active in suggesting and following up the particular lines of inquiry that would be most of interest to us. We also had the cordial cooperation and support of the Secretary of Commerce, Mr. Redfield, and are under deep obligation to him for his help.

After having decided what the physical extent of our investigation should be, the committee decided that our activities in that territory would be in the nature of investigations or inquiries for the purpose of ascertaining (once more, I might say parenthetically) just why navigation was in a moribund condition, and then of course of proposing such remedies as seemed to be needed. Further it seemed to be highly desirable to conduct a campaign of useful and effective publicity for the purpose of acquainting the river communities with the potential value of their waterways and the need for assistance on their part in getting them into practical use. Further than that we thought that the most we could do was to inquire into those navigation activities that were actually in existence. There seemed everywhere to be trouble of one kind or another that required advice and assistance from such a body as ours.

The agents through whom we acted, as well as myself, were thoroughly familiar with the conditions and limitations of this peculiar kind of navigation. Most of us had spent the best part of a lifetime in connection with it in one capacity or another. So we do not overrate the value of this navigation. On the other hand we do not too lightly appraise it, and for this reason I think we were fully qualified to understand the situation as it exists, the causes that have led to this situation, and the remedies that ought properly to be applied for the amelioration of adverse conditions.

Our work started early in June and since that time we have been very actively engaged in investigations and correspondence, in visits to various localities, and in a general way considering the circumstances under which the committee was organized, those that I have already described to you. I think we have covered the field with a fair degree of thoroughness. We have found that the conclusions to which former investigating bodies have come are emphasized by the results of our own inquiries. We already knew—we knew before we started—that there was little or no navigation. We also knew that there was comparatively little interest on the part of the various local communities that seemingly ought to be very much interested in river navigation. We found out that the causes for this condition were the familiar causes that had been reported by one commission after another.

In the main these causes are doubtless the following: In the first place on most of these waterways navigation is necessarily not continuous throughout the year. In most of them it is interrupted by

a long period of very cold weather when the channels are frozen over and is again interrupted during the extreme floods of the spring months. This state of affairs leads to a disinclination on the part of the public to use this form of transportation, because in the first place it can not be definitely relied upon for any continuous period throughout the year. And second, there is the fear of hostility on the part of the railroads. It is possibly a familiar fact to this committee that the railroads do discriminate in their dealings with people who attempt to use our inland channels. It has been reported to us on very good authority that railroad freight agents have refused to enter into contracts except for an entire year. That is to say, they will not enter into contracts for the carrying of freight merely through the closed season of navigation. They want all the freight, they say, or none. That they have the right to discriminate in this fashion, no one will maintain, but that they practically do discriminate, no one will deny.

Then we have found that there is an absence of capital engaged in the business of navigation, and that results in comparatively poor and scant facilities.

Then there is a total absence of thoroughly reliable service, reliable schedules, upon which a business man can predicate his plans. Unless a business man is informed in advance that he may rely with certainty on sailings on certain dates he certainly will not consent to ship his freight over an inland route.

With the absence of capital and reliability of service is found also the lack of high grade management. The people who engage in navigation, on the Mississippi for example, with some shining exceptions, are usually men who are after the excursion trade. That is now true on the upper Mississippi River, and has been for twenty-odd years. Starting with the Diamond Jo Line and to the present day, these people have not had a great amount of interest in the carrying of freight, which is the backbone of any successful transportation enterprise. Their principal interest is in carrying excursion passengers during the fair season of the year.

Connected with these deficiencies of which I have just spoken there is the familiar lack of proper terminal facilities and of proper connection with the land transportation lines and there is a thorough lack of organization of joint and through traffic arrangements with the railroads. All these militate against the successful transportation upon our waterways. But foremost of all, most fundamental of all, is the detrimental effect of the rail rates to river points. That situation is so familiar that I forbear to enlarge upon it further than to say that as a result of our investigations of previous inquiries by others, and of a considerable period of personal experience with the matter, I am convinced that no really successful navigation can be established unless the present structure of rail rates is completely revised so as to take away from river communities those unjustly favorable rail rates that now exist and to distribute over the community in general, including the river communities, the burden of contributing adequately toward the support of railroads. At present the river communities do not pay their just share and traffic is handled to river points at unremunerative rates. Of course the ultimate effect of that condition is to render river transportation un-

profitable and practically impossible. That fundamental cause of trouble was exposed many years ago and has been emphasized again and again. There is no novelty in the conclusions to which I have come and I will say that when I speak in the first person I speak the views of the committee. We believe that without this primary change in railroad rates comparatively little can be done to establish a really useful and prosperous traffic upon our inland navigation routes.

Allied with the lacks and defects that I have spoken of, there exists, of course, a rather unfavorable state of affairs with respect to the character of the vessels that are actually used in navigation upon the middle rivers and also upon some of the coastwise routes. Just so long as the business is relatively unprofitable, and therefore fails to enlist much capital, for just that length of time we will continue to find that the vessels that are used are old and inadequate and of improper design and whenever these conditions are remedied, then we may find that improvements in the design or whatever else is necessary to carry on the business adequately, will undoubtedly be introduced, because it is a familiar fact that a large enterprise usually avails itself of the best available talent. There is no reason to expect that large capital will not take advantage of every possible improvement in the design or details of vessels to be used to carry on the business. Parenthetically I may add that such improvements as are really needed and possible are quite well known as the result of investigations that were authorized by your committee many years ago, but the fact that we now know definitely what details of design are necessary to insure the utmost possible economy in the handling of navigation itself, does not help you to acquire the vessels or to get the business. The business will be attracted to the waterways only when the waterways are set free from the handicaps which in a very general way I have outlined in my preceding remarks.

Now, then, following our deductions as to the underlying conditions that have led to the continued decline of inland navigation, our committee has come to the conclusion that to better this state of affairs it is necessary that the transportation problem of the country as a whole shall be regarded in a more logical and comprehensive way. The waterways—take the Mississippi River, for example, as an instance—can not exist by themselves. I know the Mississippi River quite accurately from the Twin Cities to the mouth, and I am very sure that there is not enough traffic that originates directly on the banks of the Mississippi River to enable any very large number of vessels to do business there.

Mr. FREAR. Is there enough to enable one vessel to do business?

Col. KELLER. There is more than enough for one. From St. Paul to St. Louis there are a great many relatively small but prosperous cities. Mr. Frear knows them quite well. I perhaps know some of them equally well, and I have no doubt that from those cities enough traffic would originate for a limited number of vessels.

Mr. FREAR. What cities, what traffic, and what character of freight?

Col. KELLER. Let us begin with Minneapolis and St. Paul. You gentlemen know as well as I do that Minneapolis is one of the centers of the milling industry in the United States. Now, I have not made any inquiries in recent years, but when I was stationed on the upper Mississippi River in Rock Island, between 1910 and 1913, I looked

into that matter very closely and decided that it would be commercially possible to handle flour from the Twin Cities to New Orleans.

Mr. FREAR. I thought you said at the present time. You are speaking of the possibilities.

Col. KELLER. We are talking of ideals now.

Mr. FREAR. I thought you said existing commerce.

Col. KELLER. You have got to get it to the river. Those cities on the upper Mississippi do not in themselves have traffic enough to keep many boats running and freely admit that it is not being carried on the river, and I think everybody knows why. However, I did not come prepared to talk at any great length on that question.

To go back to what I was saying then, it seems to us that to introduce any improvements into the transportation system of the country in general, we have got to look at the problem as having a much broader and more national aspect than we have hitherto done. We have to realize that the river—we are talking of the Mississippi—can not exist by itself; that as a rule the river valley itself will not originate enough traffic to maintain any large and prosperous navigation; and that if such navigation is possible and commercially desirable, it can exist only because the river navigation system is coherently and economically tied to the remaining transportation agencies of the country itself, the railways, the highways, the electric lines. Whatever other agencies of transportation there may be must be so articulated into the general transportation system, if I may use that term, as to enable freight to be cheaply transferred from one to the other wherever economically desirable. In that way alone can the river or any other agency of transportation perform its proper function in the scheme of things.

Now, then, visualized in that way it becomes very plain that we need something in the way of additional law—I say that with apologies because we already have a great deal of law—to establish an agency, I do not care whether it is the Interstate Commerce Commission or something else, that shall have its eye upon the general transportation problems of the country and that shall have for its function the duty of seeing that the transportation system as a whole is the most economical that it can possibly be made to be. If we are right in believing as we do, that the rivers have their proper place in an economical system of transportation, it should be the duty of this agency to see that the rivers get the traffic that they can handle more economically than it can be handled in any other way, but unless and until we have such an agency, and just as long as this discriminatory state of railroad rates and practice is permitted to continue, only in exceptional cases will any channel, any inland channel I mean, that competes mainly with railroads that parallel both banks, let us say, be able to get any commerce at all. The conditions are such that every man who has business is practically afraid to use the river, even though deep down in his soul he may believe that the river is the economical route. There are, however, exceptional cases despite the legal and the physical obstacles that exist, where the river route, the inland navigation route, has circumstances so much in its favor as to practically neutralize the effects of railroad competition and of the unfavorable conditions that I have very roughly

described, and I think the proposal that Mr. Goltra makes is one of those. We already know, it is a familiar fact, that wherever there exists a large volume of low-grade freight, and where in addition the conditions are such as to promise a balanced operation in both directions, we have unusually favorable circumstances for the use of the navigation routes.

Now that condition exists, as I say, with respect to Mr. Goltra's proposition. He has low-grade freight both ways. It exists in virtually unlimited quantities. The demand for it is at present, and for some years to come, virtually unlimited. The result is that an enterprise that contemplates, under proper arrangements always, the carrying of coal from the southern Illinois coal fields to the Twin Cities and beyond, and of iron ore as a return cargo, has every promise of being commercially successful, and that promise is confirmed to our reason by the state of things that exists on the Great Lakes, where, as you gentlemen all know, there is a very special class of navigation engaged in this traffic. Were it not for this traffic there would probably be comparatively little navigation there, because the iron ore and coal traffic on the Great Lakes is the predominant part of the traffic. The rest of it is comparatively insignificant and more or less intermittent.

But in general, as I have said, we must have legislation to create an agency that will foster navigation and protect it against unfair practices either on the part of the railroads or on the part of any other agency of transportation that may exist or come into being, including therein unfair competition such as undue rate-cutting by the boats themselves. Once having set up this condition and having recognized the fact that the transportation problem of the United States must be treated as a unit and not in partial fashion, then I believe we will come to a state of affairs that will permit a proper and beneficial use of our waterways, both coastwise and inland.

Now, then, to go on with the practical work of the committee. The committee very early in its existence encountered one great difficulty that has militated against practical results. It is well known that the financial conditions of the country have been exceedingly unfavorable for private ventures in new lines, and indeed in well-established lines to-day industries of all sorts are clamoring for Government aid. We encountered these financial difficulties early in the history of our committee, struggled against them very unwillingly for a long time, for we were not willing to admit that private enterprise could not be made to serve our purpose, provided the fundamental difficulties were removed, but as time went on these financial difficulties became worse—that is to say, starting in June the conditions were not so very bad, were not so very discouraging, but the longer we existed and the more we investigated, the more manifest it became that private capital could not be interested in the construction of towboats or barges, terminal facilities, and things of that sort just at present, and quite unwillingly, as I say, in the end the committee came to the conclusion that if navigation is to be made available on our inland rivers and canals within the near future, some kind of Governmental support would be necessary. Just what course the Government is to take we are not positive. In Mr. Goltra's case, as the committee knows, it has taken the form of constructing a fleet which will be

chartered or leased on equitable terms. Whether that policy is to spread all over the United States we have not been able to decide, because we are at this moment confronted by the uncertainties attending the railroad situation and the legislation authorizing the assumption of the control of the railroads by the United States. The proposed railroad bill, as you doubtless know, contains a special provision relating to inland navigation, and we do not know whether it will become law in that form or not. At any event we are debarred from coming to any definite conclusion until we know what the law is to be and what control is to be exercised.

Seeing what these difficulties were in the way of extension of navigation facilities, it seemed to us that our problem lay not so much in attempting to do the impossible; that is, to create through our own authority, which was rather slender, or through the cooperation of private interests, new transportation lines. It seemed rather that the problem was to survey our somewhat circumscribed field and ascertain just what the circumstances of present use were. With this view we have taken what may be described as practically a census of the craft that are engaged in business upon the central rivers and upon this intercoastal route, and where vessels are not in use we have endeavored to ascertain why they are not in use, and in addition to that we have stimulated interest by such means as were within our power, certain experiments including the experimental trip of Mr. Goltra, using boats belonging to the United States, and a couple of trips that were made by the Keystone Steel & Wire Co., of Peoria, Ill. I believe that you are familiar with the details, but if not, and just for the record, I will say that the latter company is engaged in the steel and iron business at Peoria, and ordinarily gets its pig iron from Birmingham, Ala. Finding the railroad transportation conditions uncertain and unfavorable, the company decided that it would experiment in getting its pig iron by water. To do so it was necessary to ship the pig iron to Sheffield, approximately 100 miles north of Birmingham, and thence by water over the Tennessee and a small piece of the Ohio, the Mississippi, and the Illinois Rivers. These people made two trips with vessels that they leased for the purpose from the Pittsburgh Coal Co. The plant was not specially suitable for that kind of navigation, but the managers of the company tell us that they are so far satisfied of the economy of the operation that they have fully made up their minds to continue with it during the coming season of navigation. They are now, I understand, building wooden barges to carry pig iron, and they have arranged to charter a spare towboat belonging to the United States to use in this business.

Mr. FREAR. From what point?

Col. KELLER. From Sheffield, Ala., to Peoria, Ill.

Mr. FREAR. Sheffield is on the Tennessee?

Col. KELLER. Down the Tennessee and then up the Illinois.

Mr. FREAR. I was wondering whether or not that came from St. Paul.

Col. KELLER. No, sir; the iron comes from the Birmingham district. This is a one-way operation, and yet they tell us that from that experiment they have decided that they can carry their freight with more certainty, in a shorter time, and with more economy than by railroad.

We have also, as I say, looked into the coastwise business, and the possibility of putting to advantageous use the New York State Barge Canal, the Hudson River, and the Atlantic intercoastal routes. We find there the condition is much the same as it is in the central valleys. On the Barge Canal to-day there is practically no traffic. The main reason for that is that the Barge Canal has been under reconstruction for 8 to 10 years. During that time the older craft have either gone away to more profitable fields or have so far deteriorated that they are unfit for present use, and no new vessels have as yet been built, because just so long as any part of the canal remained unfinished it was impossible to use the larger craft that are best adapted to economical navigation on the enlarged canal. We do know, however, from our investigations that the same underlying handicaps attend the New York State Barge Canal as attend the central rivers, and that the Barge Canal ordinarily can not do a large and profitable business except in connection with the railroads, under revised rates. It may be that the canal can exist with the existing railroad rates, but as it is to-day there is little money in it and unless people can make money in a business they will not engage in it.

. Mr. FREAR. That is a very important point. Under present conditions is it possible to compete by way of the Barge Canal with the railroads?

Col. KELLER. Not as things are now, not with the present price of coal and labor. It is virtually impossible except, perhaps, in the handling of one bulky article, such as grain. That could be done, but to do it economically requires that the traffic be handled in very large quantities, and to get large quantities requires someone with the power of a dictator to say that the grain should be diverted to the canal at Buffalo.

Mr. FREAR. That involves the determination of the railroad question?

Col. KELLER. Yes.

Mr. FREAR. But without some such modification it would be a difficult proposition?

Col. KELLER. I think it would.

Mr. FREAR. I believe that is the general consensus of opinion of those who have studied it.

Col. KELLER. We have been for some time, as I say, interested in the New York State Barge Canal and been in negotiation with the New York State authorities, and with a great many representative people in New York State, having for our purpose the construction of a plant for using the canal. While it is true that, on the present basis of railroad rates, general business can not profitably be done by the canal, on the other hand it is equally true that, with the breakdown of the railroads, business men are confronted with the question whether they should pay a higher rate to the canal and get their freight promptly or pay to the railroads a lower rate for a slow and undependable service. The certainty of getting the freight delivered now is the important thing, and to business men who want their freight delivered within a reasonable period of time, a small difference in the cost of prompter service can not be of very much consequence. The water route, if properly used, certainly is the remedy

for the breakdown of railroads' transportation facilities, and the business men should be broad-minded enough to see that, and to get together and organize for its use.

On the Atlantic intracoastal route south of New York we have also taken a census of the boats and barges in use, and we found that the route is in comparatively profitable use, but there we find again this same objectionable condition as to rail rates. The principal use of the intracoastal route is in carrying lumber from the Carolinas. The barges get almost no freight going south and yet the South is suffering for coal. Anthracite coal, which originates in Pennsylvania might be very readily carried by the barges on their return. The reason the intracoastal barges do not carry it is because the railroad rates determine how much the barges shall get for carrying coal, and at these rates and because the business results in so many delays, and so many additional expenses to the barge people, they prefer not to carry anything at all rather than to subject themselves to these additional items of expense, and they go back light.

The ACTING CHAIRMAN. Who fixes the rates that the barges receive for carrying this coal?

Col. KELLER. The railroads virtually do. For example—I speak now in general figures, I did not arm myself with the precise figures, but the figures are approximately correct, close enough to the truth to illustrate the situation. The railroad freight rate on hard coal from the anthracite fields to Norfolk is between \$2 and \$3 a ton. As I say, I do not recollect the exact figures.

The ACTING CHAIRMAN. Is that by water?

Col. KELLER. No, sir; by rail. The railroad freight rate per ton from the anthracite fields to Philadelphia where that coal might be transhipped to barges and from Philadelphia going to Norfolk by water is within 50 cents or thereabouts of the rail rate to Norfolk.

Mr. FREAR. What proportion of the haul?

Col. KELLER. About a third. Now, then, that determines what the barge shall get. The man who is buying the coal in Norfolk is willing to allow the barge only the difference between the railroad through rate to Norfolk and the railroad local rate to Philadelphia—that is 50 cents. The result is that the coal does not move by water. The barges have gone out of this coal business. This is the shortsightedness of the people. They do not fight against railroad rates when in normal times these rates favor the individual at the expense of the community. When things are abnormal, however, these rates may militate against the individual as well and damage his interests. We come back to the point that there is no prospect of large traffic on inland waterways until the rail situation is very radically revised.

Mr. FREAR. I think you have struck the nail on the head, and I think most men will agree with you. What do you believe can be done? What suggestions have you in regard to changing it? Of course, we are familiar with the conditions in Germany and elsewhere where the railroads are owned by the Government, but how could it be done here in normal times?

Col. KELLER. We have a remedy. If a doctor diagnoses the case without prescribing the remedy, his diagnosis is of no particular value.

Mr. FREAR. We have been discussing remedies here, but I want to get your point.

Col. KELLER. Our remedy is to change the law, and that is perhaps more easily said than done. But I think that we all concede that this is the evil that must be cured, that railroads should not be permitted to discriminate in favor of certain communities and against others. That is what it amounts to. When they carry freight below cost to river points in any part of the country they must recoup themselves by getting an extravagant and unjust profit on some of the rest of the business, the business to inland points. We want to prevent that, and so we have had drawn up by legal advisors who were placed at our service by the War Industries Board a proposed act to regulate commerce on inland waterways. This act will take care of the situation as it stands to-day and for the duration of the war. The reason we drew it to cover the duration of the war is that for the term of the war the railroads will be under the control of the Government. When the war is over a new dispensation of some sort will be brought into effect, and when that takes place legislation for the benefit of the waterways, for their beneficial use, should be made to conform to what is done as to the railroads.

Mr. FREAR. In normal times what would be your suggestion as to sending this traffic by the waterways instead of by the railroads?

Col. KELLER. We have a system of railroad rates familiar to the Interstate Commerce Commission and to their experts. There is no reason why these gentlemen who regulate down should not also regulate up so as to compel the railroads to distribute their burden fairly. Raising the water competitive rates may involve reduction of rates to inland points. It is, of course, a very large problem. I think the people would be put in the ideal state of being able to send traffic by the most economical route, and that is all that any waterway advocate can expect. If the waterway is economical, freight should be permitted to travel that way, and no artificial restraint should be suffered to interfere. If, on the other hand, the waterway is not economical then the railroads should have the freight.

Mr. FREAR. I do not think there is any disagreement with that proposition. The difficulty is to get some good method of saying what the railroads shall do. How shall this be brought about, the classification of rates, so that the present waterways can enjoy competition with the railroads which is now largely a matter of figment, because it does not exist. How can that matter be adjusted by legislation and they compelled to raise their rates? Would the Interstate Commerce Commission make that adjustment or what means should be used?

Col. KELLER. At present the Interstate Commerce Commission has authority to prescribe the maximum rates. They ought to have authority to prescribe minimum rates. That is the logical step to rectify the injustice that now exists in our rate structure, but it will take a great deal of time to place in effect. In the meantime, with the director general of the railroads in absolute charge of the system, legislation covering the situation of to-day would be very useful, and we have made a draft of such legislation. If it is not unduly burdening the committee I should be very glad to read it.

The ACTING CHAIRMAN. Include it in the record.

Mr. FREAR. Just briefly state it and then put it in the record.

Col. KELLER. I will be glad to do so.

(The statement follows.)

DECEMBER 22, 1917.

Memorandum for: Col. Keller.

From: Mr. Dodd and Mr. Weiss, legal committee of War Industries Board.

We inclose herewith a draft of a statute in which we have attempted to embody your suggestions with regard to changes in the law to be made for the purpose of encouraging transportation on the inland waterways.

The form which such a statute should take depends, of course, in a large measure on the form in which the emergency railroad legislation now being considered by the President shall ultimately be submitted to Congress. This proposed railroad legislation is still so uncertain that Mr. Needham of the Interstate Commerce Commission was unable or unwilling to show us any draft of it. We have, therefore, found it necessary to treat the inland waterways statute as an amendment of the existing law and to draft it in such a way as to make it as far as possible consistent with the existing law.

We, however, thought it best to draft the statute in a form of a temporary enactment. Our reasons for this are twofold. In the first place we have included in the statute a section authorizing the President to take over the transportation facilities on inland waterways to the same extent as he is or may be authorized to take over the railroads. This would obviously be a very temporary measure. In the second place the whole question of what policy is to be pursued with regard to the transportation facilities of the country after the war is so uncertain that there seems little advantage in making any pretense that any statute now enacted is more than a temporary measure. It is possible, however, if you desire it, to make all the provisions of the statute except the provision for taking over the water transportation permanent in form. We believe, however, that there would be more chance of getting your ideas approved by the President and embodied in the legislation submitted by him to Congress if the provisions as to inland waterways like the railroad provisions now before him are treated as an emergency measure.

The following explanation of the detailed provisions of the statute may be of some assistance to you:

Section 1: We have defined "common carrier by water in interstate commerce" in such a way as to include all interstate water carriers, except those on the high seas and Great Lakes, over which the Shipping Board now has jurisdiction.

Section 2: We have left the provisions as to the extent to which the President is to assume control of common carriers by water somewhat vague in view of the uncertainty as to the extent to which he will be authorized by pending statutes to control railroad transportation. We have authorized him, however, to take possession not only of boats now used in common carriage but of boats which although not now so used might be adaptable for this purpose. The provision for filing a schedule of rates contained in subsection (c) of this section is copied from the Shipping Board act. We believe that by inserting this provision rather than copying the provisions of the interstate commerce act we make it clear that the requirements as to filing the rates of water carriers may be different from and less elaborate than the regulations made by the Interstate Commerce Commission for the filing of railroad rates. It would, of course, be possible to put in a statement to the effect that the intent of this provision is to make such requirements as little burdensome as possible.

Section 3: In this section we have amended the long and short haul clause of the Interstate Commerce Commission act by authorizing the President to exercise the power to allow carriers to charge less for a long than for a short haul through such agency as he may select, thus enabling this power to be exercised by a director of transportation and not necessarily by the Interstate Commerce Commission. We have also provided that "due regard shall be had to the stimulation of common carriers by water in interstate commerce." We believe that this provision is sufficient to point out to the director of transportation that railroad rates are not to be made less for a long than for a short haul where so to do would have the effect of stifling competition. It seemed to us that it was hardly worth while to provide in this

section for maximum and minimum rates as to do so would be to affect the whole system of railroad rate regulation even where it had no connection with water transportation and, therefore, no direct relation to our particular problem.

Section 4 (a): This section embodies your suggestion for permitting maximum and minimum joint rates by rail and water carriers, and your further suggestion that any carrier desiring to charge less than the maximum rate must absorb the differential. We have thought it necessary to provide that if the carrier desiring such a reduced rate be a railroad such railroad must apply to the President for permission to do so, since the effect of such reduced railroad rate may be to violate the long and short haul clause.

Section 4 (b): The intent of this section is to provide that water carriers shall not be subject to the existing rules of the Interstate Commerce Commission as to filing rates even where their rates are joint rates. This section is similar to section 2 (c) relating to the filing of rates where the carrier is wholly by water. We are not sure, however, that it is altogether desirable to provide as we have done that where the railroad and the water carrier make a joint rate the railroad shall file its rate according to one system (the Interstate Commerce Commission system) and the carrier by another system. We have, however, been reluctant to alter the existing law in regard to the filing of joint rates by railroads since to do so would disturb the whole structure of the interstate commerce act with regard to the filing of railroad rates generally.

Section 5: We have incorporated in this section certain provisions of the interstate commerce act as amended by the Panama Canal act with regard to making physical connections between railroads and boat lines giving, however, in accordance with our general plan, this power to the President rather than to the Interstate Commerce Commission. In order to avoid the possibility of a divided authority over such joint rates we have repealed all sections of the interstate commerce act relating to joint rates by rail and by water.

Section 6 embodies your suggestion for the repeal of the Panama Canal act to such extent as is necessary to allow railroads to own boats on inland waters.

Section 7: This section requiring carriers by water to make reports is taken from the shipping act. Here again our purpose is to relieve such carriers by water from the regulations of the Interstate Commerce Commission with regard to reports and accounts.

We believe that the other sections of the act are self-explanatory. Section 10 of the act providing for the termination of the powers given by it not later than one year after the termination of the war, might be altered with regard to all of the provisions of the act except the provisions of section 2 for the taking over of water carriers by the Government.

AN ACT To regulate commerce on inland waters and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. (a) The term "common carrier by water in interstate commerce," as used herein, shall include any vessel or boat, except ferry boats, engaged in the transportation of persons or property by water between one State, Territory, District, or possession of the United States, and another State, Territory, District, or possession of the United States, or between places in the same Territory, District, or possession, on any inland waters, including all rivers, inland canals and lakes (other than the Great Lakes), and such coastal waters as have been or may be designated as inland waters by the Department of Commerce under authority of law, and also any and all wharves, docks, warehouses, elevators, freight depots or terminal facilities now or hereafter used in connection with any such vessel or boat.

(b) The term "rates," as used herein, shall include all charges for the carriage of passengers and for the receiving, handling, transportation, elevation, storing, or delivery of property.

SEC. 2. (a) The President is hereby authorized to take possession and assume control of any common carrier by water in interstate commerce or any instrumentality capable of being employed as a common carrier by water in interstate commerce in the same manner and, if deemed necessary, to the same extent as he now is or may hereafter be authorized to take possession and assume control of any railroad or railroads. The President is further au-

thorized to utilize any such common carrier by water in interstate commerce or instrumentality capable of being employed as a common carrier by water in interstate commerce for such purposes connected with the existing emergency as may be needful or desirable.

(b) Every common carrier by water in interstate commerce shall establish, observe, and enforce just and reasonable rates: *Provided, however,* That the President is authorized either with or without exercising the power granted in section 2 (a) of this act himself to fix and determine just and reasonable rates, either maximum, minimum, or absolute, to be charged for any service rendered or to be rendered by any common carrier by water in interstate commerce.

(c) Every common carrier by water in interstate commerce shall be required to file with such agency or agencies as the President may designate and to keep open to public inspection, in the form and manner within the time prescribed by the President, a schedule of the rates between points on its own route, whether such rates have been established by such carrier or by the President.

SEC. 3. (a) It shall be unlawful for any common carrier, subject to the provisions of the act to regulate commerce to charge or receive any greater compensation in the aggregate for the transportation of passengers, or of like kind of property, for a shorter than for a longer distance over the same line or route in the same direction, the shorter being included within the longer distance, when such rate or rates are in competition with a water carrier or a water route, or to charge any greater compensation as a though route than the aggregate of the intermediate rates subject to the provisions of said act; but this shall not be construed as authorizing any common carrier, within the term of said act to regulate commerce to charge or receive as great compensation for a shorter as for a longer distance: *Provided, however,* That, in the discretion of the President such common carrier, in special cases, after investigation, may be authorized by the President to charge less for longer than for shorter distances for the transportation of passengers or property and the President may from time to time prescribe the extent to which such designated common carrier may be relieved from the operation of this section: *Provided, further,* That, in the exercise of the authority granted by this section to the President, due regard shall be had to the stimulation of common carriers by water in interstate commerce.

(b) Until notice by the President the rates in existence at the date of this act shall continue in force, but this provision shall not be construed, upon the abrogation of such existing rates, to relieve any common carrier subject to the provisions of said act to regulate commerce from the operation of subsection (a) of section three of this act.

(c) Section four of the act entitled "An act to regulate commerce," approved February twenty-four, eighteen hundred and eighty-seven, and all amendments thereof, are hereby repealed.

SEC. 4. (a) Common carriers by railroad and common carriers by water in interstate commerce may establish through routes and just and reasonable joint rates between rail and water lines or between connecting water lines: *Provided, however,* That the President is hereby authorized to establish through routes and fix and determine maximum and minimum joint rates by rail and water or between two or more connecting carriers by water in interstate commerce, to prescribe the apportionment of such rates between carriers involved in such joint rates, and to determine all the terms and conditions under which such lines shall be operated in the handling of the traffic involved. On application by any such rail or water carrier for a rate less than the maximum and not less than the minimum, such rate shall be imposed on all carriers involved in the joint rate: *Provided, however,* That in the division of such reduced rate, the difference between such rate and the maximum rate shall be subtracted from the proportion of the joint rates to be received by the carrier making such application: *Provided, further,* That where, in the case of a railroad, such reduced rate would result in a less rate for a longer than for a shorter distance over the same line or route and in the same direction, in violation of the provisions of section three (a) of this act, application must first be made to the President in accordance with said section.

(b) Every common carrier by water in interstate commerce joining in such joint rate shall be required to file with such agency or agencies as the President may designate, and to keep open to public inspection in the form and manner and

within the time prescribed by the President a schedule of rates between points of its own route, whether such rates have been established by such carrier or by the President.

SEC. 5. (a) The President is hereby authorized to establish physical connection between the lines of the rail carrier and the dock of the water carrier by directing the rail carrier to make suitable connection between its line and a track or tracks which have been constructed from the dock to the limits of its right of way, or by directing either or both the rail and water carrier, individually or in connection with one another, to construct and connect with the lines of the rail carrier a spur track or tracks to the dock. This provision shall only apply where such connection is reasonably practicable, such practicability to be determined by the President or his duly authorized agent.

(b) The President is hereby authorized to determine the terms and conditions upon which these connecting tracks, when constructed, shall be operated, and he may, either in the construction or the operation of such tracks, determine what sum shall be paid to or by either carrier. The provisions of this paragraph shall extend to cases where the dock is owned by other parties than the carrier involved.

(c) The provisions of the act entitled "An act to regulate commerce, approved February fourteen, eighteen hundred and eighty-seven, and all amendments thereof providing for the control by the Interstate Commerce Commission of common carriers by water in interstate commerce and for the establishment by said Interstate Commerce Commission of through routes and joint rates between such common carriers by water in interstate commerce and common carriers by railroad are hereby repealed, so far as they relate to such common carriers by water in interstate commerce and to such through routes and joint rates.

SEC. 6. The President is hereby authorized, where he may deem it of advantage to the convenience and commerce of the people or to the national security and defense, to authorize any railroad company or other common carrier subject to the act to regulate commerce, to own, lease, operate, or have any interest whatsoever (by stock ownership or otherwise, either directly or indirectly, through any holding company or by stockholders or directors in common or in any other manner) in any common carrier by water in interstate commerce, and to relieve such railroad company or other common carrier subject to the act to regulate commerce from the provisions of section eleven of an act entitled "The Panama Canal act," approved August twenty-four, nineteen hundred and twelve.

SEC. 7. The President is hereby authorized to require any common carrier by water in interstate commerce or any officer, receiver, trustee, lessee, agent, or employee thereof to file with him any periodical or special report of any account, record, rate or charge, or any memorandum of any facts and transactions pertaining to the business of such carrier or other person subject to this act. Such report, account, record, rate, charge, or memorandum shall be under oath whenever the President shall so require and shall be furnished in the form and within the time prescribed by the President.

SEC. 8. The President is hereby authorized to make such rules and regulations as he may deem necessary or advisable to carry out the purposes of this act; and is authorized to exercise such powers as are granted in this act, including the power to make regulations, through such agents or agencies as he may from time to time determine.

SEC. 9. (a) Any common carrier by water in interstate commerce or any common carrier subject to the act to regulate commerce or any other person who shall violate any provision of this act or exact any rate greater than the maximum, less than the minimum or different from the absolute rate fixed hereunder, or shall willfully violate any regulation issued pursuant to this act or shall refuse to give any information or willfully give any false information in violation of the terms of section 7 of this act shall be deemed guilty of a felony and upon conviction shall be punished by imprisonment for not more than two years or by a fine not exceeding \$10,000 or both, in the discretion of the court.

(b) The authorities and powers conferred by this act shall cease to be in effect when, for the purposes of this act the national emergency resulting from the existing state of war shall have passed, the date of which shall be ascertained and proclaimed by the President, but such date shall not be later than one year after the termination, as ascertained by the President, of the existing state of war; *Provided*, That the termination of such authorities and

powers shall not affect any act done, or any right or obligation accruing or accrued, or any suit or proceeding had or commenced in any civil case, pursuant to this act and before said termination, but all rights and liabilities under this act, arising before said termination, shall continue and may be enforced without regard to said termination. Any offense committed and all penalties, forfeitures, or liabilities incurred before said termination may be prosecuted, punished, or enforced without regard to said termination.

Mr. KENNEDY. Is it your opinion that the Director General of Railroads has the power to regulate rates?

Col. KELLER. Yes, sir; I think so; at least, the President has. I haven't, however, examined the law very closely.

Mr. FREAR. I think this is one of the most important hearings we have had in regard to this general inland waterway situation. You are familiar with the situation as you say you have been on the Mississippi River many years, and, of course, you realize that we have spent a great deal of money on our waterways. Now, let us see on what points we are in agreement. We have spent something like \$100,000,000 on the lower Mississippi from St. Louis down. That is a channel of 8 feet on the average is it not?

Col. KELLER. It is supposed to be 8 feet from St. Louis to the mouth of the Ohio and 9 feet from there down.

Mr. FREAR. Of course, that is a condition which is far better than in any European country, and yet we have no line of boats between these two points.

Col. KELLER. That is an admitted fact.

Mr. FREAR. And the commerce has depreciated as estimated 90 per cent. which I presume is true. Now, do you believe that the fault lies with the railroad systems?

Col. KELLER. Undoubtedly.

Mr. FREAR. You believe that by revision of the railroad rates that a sufficient amount of traffic would go from St. Louis to New Orleans and return?

Col. KELLER. I haven't the slightest doubt of it.

Mr. FREAR. On the upper Mississippi we have appropriated something like \$30,000,000 thus far and we have very little there. I think we will agree on that.

Col. KELLER. Yes.

Mr. FREAR. That has decreased proportionately just like the other. By the way, I might say paranthetically that last year an effort was made to show an increase in values which was brought about by \$41,000,000 in automobiles carried across the river. I do not believe the department ought to use that method of estimating commerce.

Col. KELLER. I am not familiar with that, but it should not be done. We do not count ferry traffic as being of any importance unless it is between distant points.

Mr. FREAR. In the report last year were items of live stock, teams and automobiles and unless one examines it to see the distance carried it does not show what the increase was for. It is misleading where you get the total report in the first volume, just the total. Commerce there has failed largely, for the same reason, that is the railroad rates?

Col. KELLER. Partly that and partly due to other causes. The lower Mississippi River as you recall, at one time had a general

traffic, whereas the upper river had a rather specialized class of traffic, and the great decline that has taken place on the upper river has been on account of the practical extermination of the forests and the elimination of forest products.

Mr. FREAR. But, Colonel, was it not true that for many years practically all the grain of the upper points was carried down to the lower points via the river?

Mr. KENNEDY. I happened to live right at the head of the Des Moines Rapids where all these products were shipped and transferred to rail before the canal was constructed.

Col. KELLER. That was a long time ago.

Mr. KENNEDY. Yes, but I can remember when there would be 8 or 10 boats waiting to be unloaded.

Mr. FREAR. My purpose in asking that question was to lead up to the railroad rates which I believe to-day we agree is the great trouble, the great fault, and it is not a question of channel, because the channel exists as well as it did in those days.

Col. KELLER. It is better.

Mr. FREAR. The average hauls to-day are shown by your statistics on the upper river as 14 miles on a river stretch that is 700 miles in length. That means that it is not under present conditions, getting any benefit from through traffic.

Col. KELLER. Undoubtedly that is so.

Mr. FREAR. And largely due to the railway situation.

Col. KELLER. Exactly.

Mr. FREAR. Now what is true on these rivers is largely true on the Missouri and on the Ohio, so far as long carriage is concerned?

Col. KELLER. Practically so, yes.

Mr. FREAR. Now, what do your people propose to do, what change do you propose to make at this time so as to eliminate this situation in regard to the railroad discrimination in rates. You say you propose to place some boats upon the Mississippi River.

Col. KELLER. None for the purpose of curing the general situation. I have already explained that the boats are to be placed upon the upper Mississippi River, and they have been authorized to be built for a special purpose and I think that that special use is possible in the face of existing railroad rates. There is no necessity for changing railroad rates in order to make this special traffic profitable. That is Mr. Goltra's proposition. He has already satisfied himself and the rest of us are agreed with him, that such business can be carried on without difficulty.

Mr. FREAR. From what points?

Col. KELLER. Between St. Louis and St. Paul. He gets his coal from southern Illinois, transfers it from the rail in the neighborhood of St. Louis to barges and hauls it north, and he gets iron ore from the iron ranges of Minnesota and transfers it from the rail at St. Paul and carries it south by river and unloads at St. Louis. That special class of traffic in large volumes is possible without any adjustment of the rail situation. Isn't that so, Mr. Goltra?

Mr. GOLTRA. Yes, sir.

Mr. FREAR. What is the function of the Government in this case?

Col. KELLER. Its special function has been to provide the plant which otherwise could not be built.

Mr. FREAR. The Government provides the boats?

Col. KELLER. Yes, sir; towboats and barges. We are going to build 4 towboats and 24 large barges.

Mr. FREAR. And they are to be leased, or what arrangement made?

Col. KELLER. Leased under equitable conditions to Mr. Goltra or to an operating company.

Mr. FREAR. Are there any other propositions in view as to the building of boats and leasing them?

Col. KELLER. We have had many applications but none that are predicated upon as tangible a basis as Mr. Goltra's. For example, the people who are interested in the New Orleans-St. Louis line that has been under discussion for some time past in these two cities, and elsewhere in the valley intervening, have been anxious to have the Government build a fleet for them much the same as is proposed by Mr. Goltra, and have expressed a desire to lease it from the Government. We have not up to the present time found any authority under which we could construct such a fleet. The authority given by the Shipping Board to construct this fleet for Mr. Goltra is specially limited to that case alone.

Mr. FREAR. That is an unusual course for the Government to build a fleet and then lease it as an experimental proposition.

Col. KELLER. As I have explained the committee hasn't any funds. We can not build any special plant. All we can do is to investigate the schemes proposed and decide whether they would be profitable as commercial or private enterprises.

Mr. FREAR. And the Government has been experimenting to find out what would be most suitable for river traffic?

Col. KELLER. Yes.

Mr. FREAR. What kind of a boat?

Mr. OSBORNE. Before we get too far away from it, Col. Keller was making an explanation, whether he completed it or not, of what other reasons there were besides railroad competition for the falling off in the commerce.

Col. KELLER. I did not cover it as fully as might have been done. There has been a great change in the direction of traffic, the routing of traffic in general in the United States, due to the growth of the country. Up to the time that the railroads crossed the Mississippi River the Mississippi River was the principal outlet for the country adjacent to the river and practically the sole one for the country west of the river. The railroads crossed the river in the period close to the opening of the Civil War, and there gradually began a change in the direction of traffic to east and west. As railroad systems grew in extent and power they greatly reduced the rates. The traffic carried by the railroads became gradually greater until they absorbed practically all of it and that in spite of the undoubted possibility of the economic use of the waterways. How this was done is a very familiar matter. I am personally acquainted with the upper Mississippi River. When I first went there there was only the one line, the Diamond Joe Line, the same boats now owned by Streckfuss. Later it developed at a formal hearing by the Interstate Commerce Commission that this Diamond Joe Line was financed by the Chicago, Milwaukee & St. Paul Railroad. I do not think we need further enlarge upon the reason why the Diamond Joe Line did not do a large business.

Mr. KENNEDY. The Streckfuss line does not make any effort to get freight? It operates its boats about three months during the heated period of the summer.

Mr. FREAR. I will add that it does not carry any appreciable freight during the three months they run.

Mr. KENNEDY. They have been turning down freight to points wherever they don't want to land?

Col. KELLER. This is a cause contributing to the decline of river traffic. Early in my statement I indicated that unless a dependable schedule was maintained by a boat line the community could not be expected to patronize it. Where a railroad is more dependable the shippers will naturally use that.

Mr. KENNEDY. I have heard the statement made that the Streckfuss people will not operate their line this next season.

Mr. FREAR. May we get back to the kind of boats that the Government is experimenting with? What kind of boats?

Col. KELLER. We are planning to build 24 steel barges. The barges will be 300 feet long, much longer than have ever been used on the upper Mississippi. Forty-eight feet wide, and it will be possible to load them to a draft of 8 or 9 feet when the river is high enough. At the maximum draft they will carry 3,000 tons per barge, and at minimum draft, say $3\frac{1}{2}$ to 4 feet, when the river is low, each of these barges will carry about 750 tons, or enough to make it possible to pay expenses at such times. Any barge line of this character must depend upon the higher stages of the river for its large profits, and must plan on being able to do not much better than to pay its running expenses during the time when the river is abnormally low. The tow boat is to be of unusual size and power for that. It is to develop 2,000 horsepower at full draft when fully loaded with coal.

Mr. SWITZER. Do they shove them or pull them?

Col. KELLER. They will push the barges, but the towboats will be equipped so that they can also pull the barges. Each barge is provided with a rudder, and the towboat is equipped with towing machines, to be used in pulling the barges.

Mr. SWITZER. What motive power?

Col. KELLER. Rigid stern wheel, with radial blades. We would prefer the feathering stern wheel. It is lighter and in some ways more economical than the wheel of rigid blades, but in such large boats the feathering wheel would be a departure from any practice we are acquainted with, and it would be more vulnerable to damage. While the feathering wheel has great advantages, it seems inadvisable to make the long step from our existing experience to feathering wheels for these very large towboats, which will cost \$300,000 each.

Mr. SWITZER. How many towboats?

Col. KELLER. Four, and 24 of the barges.

Mr. KENNEDY. How long are the boats to be?

Col. KELLER. Two hundred feet.

Mr. GOLTRA. The barge 300 feet and the steamer 200 feet.

Col. KELLER. Yes; 198 feet, to be exact, the hull is 198 feet. [Pointing to blue print.] That is the stern wheel. The machinery is to be of the most improved type. We are going to use everything that contributes toward economy of operation. The towboats will have

compound condensing engines, superheaters, economizers, mechanical fueling devices, and, possibly, automatic stokers. We are going to take advantage of everything known in the way of mechanical improvement, whether on the water or on the land. The railroads have in recent years gone over to automatic stokers. They have passed from steam at ordinary pressure to superheated steam and found that advantageous. We are going to put in all those things in this boat. We are going to abandon the stereotyped design of the western rivers and build something that we think represents the latest thought on the subject.

Mr. FREAR. Are these boats in existence in this country?

Col. KELLER. They are new as to details, but not in general principle.

Mr. FREAR. Do you believe, getting back to the original point, which is the important one in determining our action in regard to transportation, do you believe that this can be carried on profitably notwithstanding the present railroad rates?

Col. KELLER. Yes, sir; I do, but on the upper Mississippi only in this special traffic.

Mr. FREAR. And that of course would be covered by the particular locations for which it is to be carried, from St. Paul, down to what point?

Col. KELLER. St. Louis.

Mr. FREAR. What has been the experience of Mr. Bernhard, who has built a number of barges and has attempted to make it profitable on the Mississippi. You are familiar with that?

Col. KELLER. I am familiar with the matter in a general way. I know nothing from my own direct personal knowledge. He has built only one barge for use on the Mississippi River. He operated that intermittently.

Mr. FREAR. That has been on the upper and lower?

Col. KELLER. No; as a regular thing, only as far as St. Louis. He did however make one trip to St. Paul. He built a boat, the *Inco No. 1*, according to his own special ideas designed to handle a high-grade package freight only. He claims that his venture has not been profitable because of the reasons that I have given. His principal complaint is the difficulty of securing reciprocal traffic arrangements with the railroads. He took one case before the Interstate Commerce Commission a case in which he had secured traffic from Indianapolis for transshipment at St. Louis, on which the railroad refused to make joint and through rates with him as provided by the Panama Canal act. He finally got a decision requiring the railroads to enter into joint and through rates. But the decision was rather peculiarly worded and he says it was not what he asked for.

Mr. FREAR. He went to St. Paul, and after careful investigation by the chamber of commerce it was published that he was only promised 12,000 tons for the year, of freight from St. Paul down the river, and of course that was one reason for his disappointment. He did not find cooperation on the part of the shippers. Now is there any line of boats to-day on, say, the Missouri and Mississippi—I don't know so much about the Ohio—that is being conducted at a profit? What line of business?

Col. KELLER. I do not think there is any boat engaged in traffic between fixed termini that is doing a very large business and making money, so far as I am informed. There may be some engaged in local business down South, either on the Mississippi itself or on some of its tributaries that are doing a good business in a country where railroad facilities are poor and the rates high. I do not think there is any boat engaged in long distance traffic that is making much money.

Mr. FREAR. Making anything?

Col. KELLER. I think the Aluminum Ore Co. is finding it profitable under certain conditions to handle its business, to carry its freight from Arkansas points to East St. Louis, a comparatively long haul. They carry bauxite, which is the ore from which aluminum is made. They ship it by rail from the interior of Arkansas and then by water up to East St. Louis.

Mr. FREAR. What length of haul?

Col. KELLER. I do not know exactly, perhaps 500 miles. I can correct the record when it comes up. I do not know the exact distance.

Mr. FREAR. That is a peculiar kind of high priced freight, I mean aluminum?

Col. KELLER. It is not aluminum. It is the clay from which aluminum is made, and its unit value is low.

Mr. FREAR. Why wouldn't it operate with other classes of freight?

Col. KELLER. Hitherto they have not solicited general traffic. They have a fleet specially for their own business. That is what they bought the fleet for, and prefer to use it for. They, however, this season felt that the time was propitious for getting general business down stream and they have been soliciting down stream business, and have been getting 20 per cent of their capacity down to Memphis from St. Louis.

Mr. SWITZER. You think, however, that this particular class of business, the hauling of coal and iron ore, there would be a sufficient amount of that to make it remunerative to these people to operate this boat line?

Col. KELLER. Unquestionably so and, on present rates, regardless of the competition of railroads.

Mr. GALLAGHER. Did I understand you to say that this would be a profitable undertaking on the part of the Government?

Col. KELLER. I think the Government will earn a reasonable rate on the money invested.

Mr. FREAR. What are the reasonable rates expected?

Col. KELLER. We haven't yet made the formal contract because these barges have not been passed on by the Shipping Board. Their consent may be necessary to the making of the final contracts.

Mr. GALLAGHER. They do not designate anyone?

Col. KELLER. We understand in an informal way that Mr. Goltra was to have preference.

Mr. SWITZER. Similar to other things that the Shipping Board is doing?

Col. KELLER. They have ample authority. They secured an opinion from their counsel as to the legality of what they propose to do.

Mr. FREAR. Not as affecting that proposition but as affecting the decision of economical administration looking to the future, until

railroad rates are lower, what would be a reasonable rate for the Government in this case?

Col. KELLER. Well, the Shipping Board will undoubtedly have to make the final decision. It would seem to me that if the Government were indemnified for depreciation, if the plant was kept up to its normal efficient state, and if in addition to that the Government earned a reasonable rate of interest on its investment, the Government would be getting all it should. Anything more than that would be a tax on the enterprise.

Mr. GALLAGHER. In an experiment like this, I think it is unfair to figure what the Government is to make on the start?

Col. KELLER. I think it is fair, if you will pardon me for differing. The thing has been very strongly urged upon us by those who are interested in securing the lease of the boats and I believe those terms are not unfair.

Mr. GALLAGHER. But in an experiment can they tell?

Mr. SWITZER. They are taking the risk.

Mr. GALLAGHER. They are not guaranteeing any particular amount?

Col. KELLER. So far we have not entered into definite arrangements. As Mr. Goltra is here possibly it will be well to ask him what he thinks of the terms I have outlined.

Mr. FREAR. Just one more question. I understood you to say that some of these people on this inland waterway board are practical river men. Are any of them men who have been carrying on a profitable business? Has Capt. Ellison been carrying on a profitable business?

Col. KELLER. No, I don't think he has. I do not know whether Capt. Ellison has made much money out of it.

Mr. SWITZER. He is a practical river man.

Mr. FREAR. Has he been in recent years?

Col. KELLER. Up to a few years ago. But you understand what the committee has decided, the conclusions it has come to, have been the result of a great deal of discussion. Neither Capt. Ellison nor any other man has been an overwhelming force in making the decisions of the committee.

Mr. FREAR. What other men have had actual experience in the handling of any profitable waterway enterprise on the rivers that you know of on this board?

Col. KELLER. I think R. A. C. Smith, who has actually been engaged on the ocean and is familiar with the business of navigation or water transportation generally. So is Mr. Saunders.

Mr. FREAR. The reason I asked that, the entire failure of the inland waterway transportation on the rivers we have been discussing has been so pronounced I was wondering what judgment had been secured in the country to determine this question of waterway transportation lines.

Col. KELLER. Well, I rather imagine it would be difficult to get any body of men together who would be regarded as having had sufficiently satisfactory experience on our rivers to render their conclusions and advice authoritative and final to all concerned. This is confirmed by your own knowledge, I imagine.

Mr. FREAR. If there is a failure in the only existing waterway line on the river, I should feel that I should not.

Mr. OSBORNE. Colonel, may I inquire if this enterprise of building this fleet of barges and towboats, if it is upon the same basis of building the ships that are being built all over in different cities for foreign trade. Is it on the same basis or is it under a separate provision of law?

Col. KELLER. It is under the general authority of the law creating the Shipping Board, so I understand. I wish to explain, however, that I am not authorized to speak for the Shipping Board, and have not been favored with their counsel's opinion.

Mr. OSBORNE. It is the same general authority that they are working on in other cases?

Col. KELLER. Yes, sir; I think they have made this distinction in the course of their instructions to us: That we shall have the designs made and make preparations for entering into the contract, but submit the contract, drawings and specifications to them for their information and approval before we proceed finally to make the contracts for the construction of these vessels. We haven't got to the point where the drawings and specifications are complete. But they should be completed within a very short time, and then the construction will be undertaken.

Mr. FREAR. I say this, Colonel, I believe that we are all agreed that it is desirable to make an experiment of this kind to ascertain the value of this system of waterway transportation, but it all gets back, does it not, in the general use of the river to the question of the railway rates which must be adjusted unless these particular instances here are successful?

Col. KELLER. I said "yes" to that same question before. I might qualify my answer a little bit by saying this, that the man whom you mentioned, Bernhard, has a theory that the waterways can be used to great advantage in carrying high-grade freight.

Mr. KENNEDY. I think he emphasizes the necessity of modern terminal facilities for water-borne commerce.

Col. KELLER. I mentioned this as I went along. I didn't think it was worth while to emphasize familiar matters, but for example, I am told this steamer *Inco* paid from \$1.50 to \$2 a ton for unloading freight at St. Louis.

Mr. GALLAGHER. If the Shipping Board has authority to go ahead with this, what particular province has this committee in the circumstances? Where do we come in?

Col. KELLER. I think you will have to ask Judge Small that.

Mr. SWITZER. They are not asking us for anything.

Mr. GALLAGHER. Why are we considering this?

Mr. SWITZER. They came to give us information.

Mr. FREAR. We haven't a practical demonstration of any line carrying on business profitably on the Mississippi or the Missouri or the Ohio. They have no traffic. You are making an experiment, as I understand it.

Col. KELLER. Yes, sir.

Mr. FREAR. That is the one thing we are interested in, and I agree with you that the question of railroad legislation ought to be taken up so that we can make use of the rivers as they do in Europe.

Col. KELLER. And I wish to supplement my reply to Mr. Frear, that on the lower Mississippi River where the channels are unusually

favorable, with the proper support on the part of the communities concerned, with a properly organized, financed, and managed transportation company engaged in navigating the river, I believe traffic conditions are so favorable that legislation would not be needed for success. Modern boats and barges, economical and efficient management, efficient terminals and perhaps freedom from cutthroat competition of other boat lines are, however, necessary, and legislation might be needed to prevent the latter.

Mr. FREAR. Why do you come to that conclusion in view of the fact that in all these years we have never been able to reach that situation on the lower Mississippi and we have spent \$100,000,000 on the channel and yet there is not a single line.

Col. KELLER. I make the statement that the freight is there in paying quantities if the people would fully organize their business so as to make use of the river, not between St. Louis, Memphis, and New Orleans alone, but with reference to South America as a commercial goal. They should aim to use the Mississippi River as a means of getting commerce to the Central and South American countries. Capital on a large scale has, however, never interested itself. The fact that there has never been satisfactory service, the fact that the railroads are giving good service, all militate against making a departure.

Mr. FREAR. Now, isn't it a fact that in the case of the Arkansas River and the Red River, and practically every project they have made estimates and promises for the probable use of the river for the purpose of carrying certain freight that is going to be developed in the shape of coal and various other materials, that they have fallen down in every case on those smaller rivers? Is there a single instance that you can give, notwithstanding the engineers' reports are filled with promises?

Col. KELLER. That is a question that I am hardly qualified to answer. Col. Newcomer is the man that should.

The ACTING CHAIRMAN. Is that all that you care to say on this subject, Colonel?

Col. KELLER. Yes, sir; I don't think that I can say much more. I may have failed to touch on several things that the committee is interested in.

The ACTING CHAIRMAN. You will have an opportunity to have your remarks, and you can go over them and extend them.

Mr. SWITZER. We shall be glad to have any amplification that you think would be of any benefit to us.

Col. KELLER. I shall, with your permission, attach a copy of a memorandum on the "Status and needs of inland water transportation in the United States," submitted by our committee to the Council of National Defense.

STATUS AND NEEDS OF INLAND WATER TRANSPORTATION IN THE UNITED STATES.

SUMMARY.

The future prosperity of this country depends upon our ability to compete in the markets of the world. This implies reduction of all costs to a minimum. Some costs are, of course, not controllable, others may be modified by improvements of processes. Transportation enters into the cost of every item of civilized life, and sometimes it enters into the final cost several times, since

the raw material, the semifinished product, and the final result of industrial efforts may each in turn be carried from the place of origin to intermediate localities where work is expended upon them.

Ample and efficient transportation is so essential to the welfare of the whole country at all times that every possible agency must be fully and properly utilized, and the cost must be as low as is consistent with the attainment of this requisite. Under present war conditions it is peremptory that immediate efforts be made to increase to the utmost the usefulness of every means of transportation. To this end, the transportation system of the country, including highway transportation by horse and wagon, motor truck transportation upon improved roads, carriage by electric car, transport by river, by belt railroads, by railroads, and by lake vessels or other deep-draft steamers must be considered as a single unit consisting of these various parts, all of which must be closely joined into a compact whole and each used wherever and whenever the general good will be served by the resulting economies. If necessary, the competitive system must be controlled and regulated, cooperation introduced, and such steps taken as will best serve the national good. Careful study should be given to the problem and the peculiar advantages and limitations of each means of transportation ascertained and laid down as clearly as possible. If, for example, the economical radius of the motor truck is 30 miles, such service should in general be limited to within that distance of the point of transfer, and similarly with the other agencies of transportation mentioned.

Efficiency requires that the economical vehicle or agency be employed and that, as the public eventually pays all costs, the public interest is so affected that the mere private preference or advantage of individual shippers or carriers should not be permitted to be decisive, as is now the case.

The intimate connection between the several agencies or means of transportation should be planned with a view to permitting transfer from one to another to be made at the lowest possible cost, and in deciding whether one agency or another is to be employed the cost of the necessary transfer and storage should be carefully considered.

One of the essential elements which must be provided is a system of proper storage and transfer warehouses. Economy in long haul transportation necessitates large carriers. Collection and distribution as a rule are most economically made by small capacity carriers. Hence the necessity for provision for storage at all collecting and distributing terminals.

Where inland water transportation now exists with proper capital, equipment, and organization, it is admittedly economical and advantageous, but on many of our inland waterways transportation is to-day virtually nonexistent, and in view of the abnormal market situation of both labor and materials, it seems out of the question to expect private capital at this time to embark in the attempt to promote their use. The war has created a real emergency, which must be met by governmental intervention and support. Each local situation calls for special treatment and the measure of Government help to be given should be determined for each separate case and be kept at the minimum amount needed in order to permit useful results to be attained.

We need the establishment of proper through and joint rates between rail and water lines, negotiable bills of lading for such joint shipments, good water terminals with efficient mechanical equipment and warehouses, and well planned railroad connections, all designed to allow as close cooperation between water lines and railroads as between the railroads themselves.

We must have a sufficient number of carriers built to operate most efficiently upon the particular waterway or combination of waterways on which they are to be used. Such carriers can be planned only after careful determination of the character and the volume of the traffic to be served and the conditions of width, depth, and straightness of the channels to be used.

While terminals should be built by the localities and public control over them retained, with uniform terminal charges held as low as possible, the carriers should as a rule be privately owned, built, and operated. Just at present it may, as above noted, be necessary for the Government to join in the construction of the carriers. This abnormal situation should eventually disappear, and then private and local interests should assume entire control and responsibility.

Finally the whole transportation problem requires, relatively speaking, the ample financial resources, the careful and systematic organization, and the high grade of ability that have made our railroads successful. Moreover, our

waterway policy should be decided so permanently and authoritatively as to remove the element of uncertainty now arising from the doubt as to whether appropriations will be made and improvement and maintenance of the channels continued.

With these prerequisites recognized and supplied, inland water transportation can readily be relied on to demonstrate its claim to be considered an essential element in our national transportation system.

DISCUSSION.

If all the resources of the Nation are to be utilized to their fullest capacity, so that the collection and distribution system upon which modern commercial life depends shall be the most economical possible, all means of transportation from the hand truck to the steam railway train must be coordinated, instead of being in destructive competition. All are public service utilities, and just as a sound public policy has demanded that gas, water, telephone, and street-car service in cities should be regulated monopolies rather than independent competitors, so transportation agencies must be coordinated, and made to act together for the general good. Each transportation agency has its own sphere of economic service. To-day this is only in a measure recognized. The result is that independent carriers fight for traffic, and that victory is apt to lie with that one which has the best organization and largest capital, irrespective of the ultimate benefit to the public.

To cure this state of affairs radical changes must be made in our methods and even in accepted ideas. The railroads to-day complain that their earnings do not form such a percentage on the money invested as to permit the normal amount of betterments and renewals to be made. Higher rates are demanded, and doubtless are needed, but if granted they should be gradually adjusted on the basis of public service rendered, founded on the cost of such service, and not by arbitrary charges. Shipments by water must be made compulsory, if the public good so demands; and the facilities for making water shipments economical and the service convenient must be provided. An entirely new field of effort must be exploited in the full utilization of electric lines and of auto-truck service.

All of this demands; first, intelligent and close investigation; second, a wise decision; and third, firm execution.

The subject is of such importance as to merit any necessary public expenditures.

Our inland waterways have been greatly improved and many of them have channels which render navigation by properly designed vessels—relatively cheap and simple. In some localities these advantages are recognized and utilized, in many others the extent of utilization falls short of what the experience with water transportation shows should exist if ultimate economy and the greatest possible benefit to the general public are to be attained. It is the purpose of this discussion to define the relation of inland water transportation to other agencies and to indicate the steps that should be taken to bring about such use of the inland waterways as is admittedly desirable.

In attempting to arrive at a clear understanding of the problem of establishing upon our inland waterways a practical and economical system of transportation, it seems desirable to formulate definitely the component parts indispensable to any system of transportation adapted to modern methods of doing business. From such a description it will be possible to deduce the essential components of a really successful water transportation scheme, and in turn to indicate wherein existing conditions present obstacles which must be removed before any great measure of success may be expected.

Assuming that its origin is at the warehouse or factory, the steps in the process of transportation are as follows: (a) Transfer from the warehouse or factory to the main carrier. This transfer may take place immediately at the door of the warehouse, or industry to a freight car on a siding or industrial track or, similarly, in the case of a waterside location, to a steamboat or barge. If the transfer is direct, to be economical it must be performed by devices planned to operate quickly and cheaply, thereby reducing not only the direct cost but losses due to delays. The equipment used must, of course, be adapted to the character of the commodity to be handled. Or the transfer may be less direct and simple, because the place of origin of the shipment is at a distance from the nearest point at which the main carrier may be reached. This condition results in a truck haul to the main carrier and usually requires

transfer through a receiving freight warehouse, since a cargo or carload of materials must be accumulated and it will not happen generally that cars or boats will be available at precisely the moment when shipment is begun. For less-than-carload lots the freight warehouse or receiving station is always an intermediate link in the transportation chain. Indirect transfer will probably be the general rule in water transportation systems until they become so numerous and so dependable and economical as to induce industry once more to locate upon our water fronts. Wherever indirect transfer prevails, the trucking system must be efficiently organized, using motor trucks for long or heavy hauls, and the warehouse must be built and equipped with a view to ultimate economy in unloading and storing the goods and in finally transferring them to either cars or boats. There are also numbers of locations where the service of public belt railroads and the switches or main lines of railroads can be utilized to haul freight in carloads or less from the warehouses to the wharves of the water carrier. (b) The next step is transportation by the main carrier.

This may be either a railroad or a boat or barge. In the general case the routing will contemplate transfer: (1) to a connecting railroad; (2) to an ocean carrier at the seaboard; (3) to an inland water carrier. Case (1), for economy, implies intimate union between two rail systems, or between the water carrier and its rail connection, and the latter in turn necessitates the employment of suitably planned devices for effecting economically the transfer from the water carrier to the railroad, including mechanism for removing cargo from the boat or barge and usually a proper warehouse for storage preliminary to loading into the care of the rail connection. Case (2) involves several variations. Thus the carrier, whether railroad or water line, may terminate immediately at the wharf of the ocean liner. This is the most economical variation and transfer, final for our purpose, then takes place either directly into ocean carrier or more usually into a warehouse. The wharf must in this case be supplied with a properly planned warehouse and with proper cranes or other machinery for unloading from cars or boats, putting the goods into the warehouse, or, when permissible, direct into the ocean-going steamer. Sometimes, however, full cargoes for an ocean carrier can not be accumulated nor supplied directly from the inland carriers at the point where she must lie. This variation necessitates lighterage and proper facilities for removing cargo from cars or boats and placing it on lighters. In this variation, also, a warehouse may intervene. (3) This is like (1) except when the carrier is a boat, and in this case, after transport by initial boat line, transfer takes place as before, either through a warehouse or direct to connecting boat line. The prerequisites for efficiency have been indicated above. (c) After transport by initial carrier delivery may, as above indicated, be preceded by transfer over a connecting rail or water-line or delivery may be directed to consignee at destination upon the line of the initial carrier. In either case, rail or water transportation is followed by the processes described under (a), but these take place in inverse order.

The essentials of a successful transportation system, though perhaps reproduced one or more times, are comparatively simple and may be summarized as being storehouse space for distribution and collection, proper transfer equipment, including loading and unloading devices, and motor trucks, and belt roads, good transportation facilities, including highways, railroads and improved waterways, and efficiently designed carriers, whether locomotives, cars, steamboats, towboats, or barges, and finally, close and efficient connections with and between the various classes of carriers. These prerequisites are so closely related that, without them, really efficient and economical transportation, whether by rail or water, can not exist. Even where these essentials are furnished under proper plans, for greatest efficiency each element must be available to all users upon fair terms. In addition, for successful operation, capital must be available in amounts proportioned to the importance of each enterprise, a proper organization must be created, and the stability and continuity of the business must be reasonably assured. Above all dependable service, upon which commercial arrangements may safely be based, must be furnished and maintained continuously.

Under proper supervision and regulation, theoretically, the cost of transportation to the people would be reduced were all the agencies of any transportation system under a single efficient management. Examples of the economy resulting from such a policy can be cited in commercial enterprises in our own

country. Unfortunately there is a strong feeling that the profits from these economies are not fairly distributed.

Existing transportation upon our inland waterways has hitherto suffered under disadvantages and disabilities many, if not all, of which must be remedied before these waterways will be able to make that contribution toward the ultimate efficiency of our national business of which they are really capable. These difficulties are mentioned and briefly discussed in the paragraphs that follow.

The waterway policy of the country has lacked that assurance of permanency and stability so necessary to interest capital. For years past it has been the recognized but intermittent policy of the Nation to improve inland waterways at national expense and to render them available for general use without exaction of tolls, fees, or charges of any kind. Many waterways have been greatly improved, but the policy has always been more or less criticized. Appropriations have not always been regular or sufficient and they have frequently been classed as "pork-barrel" appropriations, the implication being that they were made to affect local sentiment or for merely local benefit and not for the general good. While the work of improvement has continued, at any moment it appeared liable to interruption, and therefore sane and careful business men did not feel justified in making investments in water-transportation enterprises whose very life seemed so uncertain. Thus capital has never been available in the large amounts really needed and as a necessary consequence not only have proper carriers and terminals been lacking, but the high order of business ability and organization usually accompanying large operations and absolutely necessary in this case, has also been absent. On many waterways such service as exists is now given by individuals of comparatively limited means and capacity, and the service is often not such as to inspire confidence in shippers as to its dependability.

In a general way, it has been shown that any satisfactory system of transportation, operating in a large way, consists of these principal elements, transfer facilities, terminals, roadways and carriers, and that whether the actual route is principally by rail, or more largely by water, the rail, the water, and the highway are essential parts of the system. Unless they are closely coordinated and connected, with complete freedom to each to use the other on terms equally fair, our transportation system fails to attain its highest usefulness. A further deterrent to the investment of capital in the development of inland water transportation is the past attitude of the railways toward the waterways, and the inequalities of existing rail rates.

Until the passage of the Panama Canal act of 1912, there was no law to compel the railroads to make physical connection with waterway lines and to establish with them through or joint rates. On the contrary, the railroads were at liberty to adopt any attitude they might deem to their interest toward water carriers, from competing ownership to a refusal to recognize them at all. As railroads were extended transportation upon inland waters, once prosperous, began to languish and has finally dwindled into comparative insignificance, but rail competition is still active and frequently takes the form of unusually prompt car service at points with water competition and of rates lower than for the same service to interior points. The actual manifestations of this competition are best seen by examination of the appended table of rates now in force. The table shows, side by side, rates from river points to certain terminal points lying on rivers and to others at practically the same distance but lying inland. It is evident that, where even merely possible water competition exists, the rates are very low, whereas in the contrary case they are much higher. Just so long as the railroads are permitted to carry part of their traffic without the average of profit and to reimburse themselves at the expense of the rest of the country just so long will the waterways have difficulty in carrying their just share of the country's traffic. We have been informed, that in some cases the railroads intend now to raise abnormally low rates which are based upon merely possible, and not actual, water competition, but the readjustment so far appears slow. To the objection that raising of rail rates to water points will benefit only the railroads, the reply is that if rates to interior points are unduly high they should be reduced and that, moreover, the water lines may be expected to charge rates at least as low as the present nominally competitive railroad rates, since otherwise the waterway will probably get none of the traffic in the present circumstances of location and organization of our mercantile community.

An example of these water competitive rates was recently brought to our notice by a river boat line and inquiry showed that the rail rate on lumber from Arkansas City, where water competition may arise to Cairo, Ill., is about two-thirds the rate from McGehee, Ark., an interior point, although traffic from Arkansas City to Cairo passes through McGehee. Rail rates from the lumber-producing territory in the vicinity of Arkansas City have recently been raised, but those from points having possible water competition still remain relatively low. Illustrations of this kind might be multiplied indefinitely.

Except as a last resort, at present shippers will not use the waterways unless water carriers can offer a reasonable differential under the rail rates, thereby affording a sufficient saving in cost to transportation to compensate for a supposed difference in time and service, and a proper use of the waterways will not be made until this requirement is met. In a certain case the rail rate was 10 cents per hundred, Arkansas City to Cairo, while the barge rate was 6½ cents. This does not, however, mean a saving of 3½ cents to the shipper, because the latter pays the cost of transfer to cars at Cairo and may, moreover, be at greater expense for loading to barges at point of shipment, since cars are usually set conveniently and a wagon haul is often required to load the barges.

Until railroads operate in close harmony with water lines, affording them the same advantages as are given other rail lines, the water carriers will for the general run of business remain at a disadvantage. For example, unless water lines are parties to through traffic and rates, they are unable to issue through bills of lading, and as only the latter are bankable, a shipper by water is obliged to carry a heavier financial burden than is the rail shipper, who, at present, can secure credit at the banks on the security of his bills of lading.

A further point should be made in regard to the proper adjustment of relations between rail and water lines. This is based upon the experience of a steamboat line operating between St. Louis and New Orleans and endeavoring to conduct a traffic in high-grade freight. This company found it impossible to exist on earnings derived only from freight originating and terminating on the Mississippi River, and attempted to handle traffic to and from inland points and therefore requiring a rail haul in addition to the river haul. On approaching connecting railroads and asking for joint and through rates, these railroads, despite the terms of section 11 of the Panama Canal act of 1912, refused to join in rates. Thereupon, this company, on July 18, 1916, instituted a proceeding before the Interstate Commerce Commission (Docket 8709) and, on April 2, 1917, the commission ordered the railroads on or before July 16, 1917, to establish joint rates, "which shall not be higher than the contemporaneous rail rates." As soon as the decision was rendered, the navigation company complied through rates but the railroads declined to join in them, because the proposed through rates were lower than the all-rail rates and the aforesaid order of the commission required the establishment of rates "no higher than" the prevailing all-rail rates, from which the roads argued that they need not join in any rates lower than the all-rail rates. This contention was a substantial denial of the relief sought and contrary to the doctrine laid down by the commission in Docket No. 2226, in which the commission maintained that if the railroads were permitted to force their rates on the water lines, the inevitable result must be "the going out of business of such (navigation) companies." Yet, the navigation company has not had the relief it desires and is therefore to-day still unable to offer the inducements needed to attract traffic.

The principle laid down in the earlier case is, under existing methods of the commercial world, essential to the establishment and prosperity of inland water transportation. To compensate for the inconveniences incident to employing a hitherto unfamiliar agency, and to offer an incentive toward incurring the trouble and expense of adapting current commercial practices so as to render the waterway better available, the water carrier must be able to offer a through joint rate lower than the existing all-rail rate, but any reduction authorized need not affect the railroad which is party to the joint rate. On the contrary, the water carrier should absorb the reduction, and in the particular case above described was anxious to do so. This will merely require that the Interstate Commerce Commission shall permanently adopt and publicly reiterate the principles of its decision in Case 2226. This course will certainly help water carriers seeking to secure traffic to and from inland points without which, except in a very thickly settled country, inland water lines can not earn a living. It should be added that section 11 (d) of the Panama Canal act gives

the commission authority to issue orders "in proceedings instituted by the commission of its own motion."

The prosperous water traffic which to-day exists on some of our waterways, notably, the Hudson, the Monongahela River, the Ohio River coal trade, the Great Lakes, Long Island Sound, in the face of rail competition, and the favorable experiments lately made on some of the western rivers not yet adequately improved, not to mention the fear of such traffic reflected in the lower rail rates existing at points having actual or possible water competition, all show the economic value of water carriers. This fact seems so well established as to require no further argument. Properly regarded, all means of transportation, wagons, motor trucks, trolley lines, belt railroads, railroads, water lines, and ocean lines are part of a single system and the greatest good of the people in general demands that they be so treated, and that wise foresight provide that each agency, principal or subordinate, be permitted to contribute its part most economically and efficiently to keep transportation costs at a minimum. This will mean cooperation between rail and water lines instead of the unrestricted competition which has hitherto existed and which has been detrimental to both water and rail interests, and in no sense constructive or progressive.

After the close of the war we shall experience competition with an impoverished Europe and we must plan to reduce costs to the greatest possible extent. This means that we must act now and not rest idly to be stirred to activity only when the emergency is actually upon us and our business at the mercy of foreigners. We must therefore seek to establish at once the close and cordial relations between our various agencies of transportation that will produce the lowest possible rates. In some cases this policy may involve a redistribution of traffic and a loss to some carriers. This must be accepted as inevitable, but the loss resulting should be merely temporary. If, on the whole, the railroads have all the business they can readily handle, then the normal growth of the country tributary to waterways should, if these are really economical routes, be taken care of by the enlargement of water carrying facilities and not through investment of new capital in the extension of railroads or the increase of their facilities. Eventually cheap, reliable, and efficient transportation upon the waterways will cause their valleys to improve and will increase their business and the density of their population. This, in turn, should lead to greater and more valuable business for the railroads in the same region and the effect upon the entire country can not fail to be beneficial.

At present the inland waterways are, as a rule, lacking in the proper organization of their facilities of all kinds. Originally business grew up and was located on the banks of the waterways. When the railroads superseded the water carriers, and partly because space for expansion could also best be obtained by removal, business withdrew from the river bank or at any rate readjusted its methods so as to depend almost exclusively on the railroads. In their heyday the rivers had but few well planned and economical terminals. I. e., what is now understood by the term good transfer facilities, including well located, conveniently arranged and sufficiently commodious warehouses with efficiently planned mechanical appliances for making the actual transfer from boat to warehouse or vice versa, nor did the boats themselves incorporate the proper arrangements for economical loading and unloading, collecting and distributing. To-day proper river terminals, suitably connected with railroads and adjusted to the going methods of business, virtually do not exist. They must be supplied and as they should serve the entire community, they should not be owned by private interests, but should rather be constructed and operated by the towns concerned. It should, however, be stipulated that a wise policy demands that on each waterway the various towns shall confer with a view to harmonizing terminal designs with the character of the business to be transacted. This in turn involves the need of ascertaining as closely as possible the amount and character of the traffic that will probably be handled, by means of a careful traffic survey by component men. Charges for use of these terminals should be alike to all and very moderate.

The present situation as to water carriers is almost as bad as that of the terminals. Few steamboats and barges are available and these are rarely of the best type. Towboats and barges and perhaps self-propelled barges must be provided and these should be designed with full knowledge of the character of the business to be served and of the requirements of the terminals at which freight is to be delivered. The problem of water transportation is one that calls for a comprehensive view, and just as it is impossible to design part of a

machine independently of the other parts, so it is impossible to plan the water carriers without complete knowledge of the situation including the characteristics and limitations of the stream under consideration. Each inland waterway requires special treatment in this regard.

At the present time, the cost to private parties of constructing boats is prohibitive, thus making an insurmountable difficulty in the way of interesting private capital in inland water navigation, particularly as money must be furnished in large amounts and the venture undertaken with a full comprehension of the need for ability and organization of a high order to develop a neglected but essential transport facility. Public interest in inland water transportation is luke-warm, and in view of the abnormal cost of carriers and of their operation, and the risk involved in the attempt to establish this virtually untried enterprise, it is natural that the community be reluctant. In the opinion of your committee, in the existing circumstances, the policy of the United States, as to floating equipment, should be to give support, either by the direct construction of boats and barges and their subsequent charter to trustworthy concerns, or by enabling materials to be secured promptly and cheaply by such dependable concerns as are shown to desire to build their own fleets. The amount of help given should be the least that will permit needed water transportation enterprises of assured character promptly to be initiated, and any investment by the United States should be carefully protected.

The provision of needed facilities, equipment and organization will take time, money, and patience, and ability of a high order, but eventually success will amply attend properly planned efforts to make more adequate and intelligent use of the capabilities of our inland waterways.

RECOMMENDATIONS.

1. Inasmuch as the ruling of the Interstate Commerce Commission in Docket 8709, has been nullified by the action of the railroads in declining to join in through rates, rail and water which are lower than the all rail rates, and in view of the commission's ruling in Docket 2226 the commission should be requested to at once clarify or amplify its ruling in the Case 8709.

2. That the Interstate Commerce Commission, or other national governmental body to whom may be delegated the rate regulating power applicable to inland water carriers, shall take up at once the duty of regulating rates throughout the system of waterways, establishing minimum and maximum rates with such differentials below competitive rail rates as may be deemed equitable and necessary to permit traffic upon inland waterways to be conducted with reasonable means, and under rules and regulations such as will not impose undue expense in accounting, filing of tariffs, and the conduct of proceedings before the commission or other authorized body.

3. That this committee earnestly indorses the provision in the law creating the Council of National Defense for the coordination of all the transportation agencies and facilities of the country, and trusts that efforts to this end will meet with eminent success, and the committee pledges its support and cooperation.

4. In view of the peculiar and unusual difficulty of building water equipment under present conditions, the committee strongly recommends that the Government, through the Shipping Board, build the necessary equipment and lease the same under reasonable terms, with option of purchase, to responsible private parties. It is understood that the New Orleans Board of Trade and the St. Louis Merchants Exchange stand ready to organize and invest in a corporation which would lease Government equipment for service upon the lower Mississippi River. It is the understanding of this committee that the New York State Barge Canal authorities are desirous of securing assistance in placing suitable equipment upon the State canal, for national uses at present and for general use later upon the canal.

The ACTING CHAIRMAN. Mr. Goltra, are you ready to proceed?

STATEMENT OF MR. E. F. GOLTRA, OF ST. LOUIS, MO.

Mr. GOLTRA. In a general way, Mr. Chairman, I can matriculate as a chorus singer with Col. Keller in his remarks with but one or

two exceptions. I am going to depart for a moment from what I had prepared to say to you and plunge right into the matter of the reasons why this commerce has disappeared from the inland waterways. I think I know why. It is because of the low railroad rates. We American people, you and I and all of us, have been fooling ourselves, gentlemen, and the fellow that fools himself I have found is the worst fooled fellow after all. We have been hammering at these railway transportation people until we have succeeded in getting rates down below what it costs the carriers to produce it. The only thing that a railroad has for sale is transportation. That is all it has for sale. And we have unwittingly been driving them down into such a position, getting the rates so low, that here with this great sudden revival of industrial activity due to the war, we find that their credit having been taken away from them almost entirely, that they have not kept up the improvements, they have not provided the rolling stock, and they have not provided the terminals, and they have not double tracked, and now the transportation industry of the railroads is just about paralyzed.

Mr. FREAR. Isn't that largely brought on by the railroads themselves?

Mr. GOLTRA. I think, Mr. Frear, that the beginning of it was due to such unwise and unthinking railroad people as expressed the sentiment "the public be damned." Then we, the people, started in to show the pioneer railroad men who had been successful because rates were high, and had arrogated a great deal of importance to themselves, that the public was not going to be damned, but we have gone to work and carried it to such an extent that the public is damned.

Mr. GALLAGHER. To what extent has watered stock had to do with bringing about the conditions?

Mr. GOLTRA. I don't think that watered stock has raised or lowered the rates at all.

Mr. GALLAGHER. It has made a lot of difference in the expenditures of railroads so far as dividends are concerned and improvements.

Mr. GOLTRA. No doubt of it.

Mr. FREAR. If you will pardon me, when we passed the railway commission bill in Wisconsin, we ascertained from one of the experts that one of the largest railroads in our State was making 25 per cent on the business at that time.

Mr. GOLTRA. My reply to that is that I have found that the American people are the worst bookkeepers in the world. I do not believe that these railroad men themselves know what it is costing them to produce transportation.

Mr. FREAR. These were experts of the State government.

Mr. GOLTRA. I would like to state, gentlemen, that I am not a railroad man. On the contrary, I am on the other side of the counter and a very large shipper. If any one in America desires low rates, certainly I am he. Therefore I am not biased. But to come back to the long discussion which you were just having. The traffic on the inland waterways, gentlemen, is going to be resumed because Uncle Sam having hold of the railroads is now going to be compelled to raise the rates and with these rates being raised to a point where they will be sufficiently adequate to pay the cost of producing

this transportation you will find that the rivers will come in. The situation has gotten so bad that it is going to straighten itself out, but we are going to wake up and find that we have been fooling ourselves.

Mr. SWITZER. The railways have got to secure an immense amount of new equipment.

Mr. GOLTRA. Yes, sir; the situation of the railroad plant is deplorable. I am engaged in making iron and steel. I am simply a humble manufacturer out in the Mississippi Valley and it has been almost impossible to keep going on account of transportation conditions, the condition of the transportation plant. There is, gentlemen, up in the northwest country a very large deposit of oxide of iron, iron ore. It is on the northwest coast of Lake Superior, the greatest known deposit of iron oxide in the world. The amount of tonnage is tremendous, and notwithstanding the fact that we have been taking from those deposits lately at the rate of 62,000,000 of tons in a season, it has made no appreciable effect on the reserves up there. Latterly a new range of iron ore has been found, known as the Cayuna River. That is located south of the Messaba and the Vermilion Ranges, and just north of the city of St. Paul, between St. Paul and Duluth. The tonnage in this new range is enormous. New deposits are found from month to month. Down in western Kentucky there is a very large deposit of coal of such a character as makes it suitable for the production of coke, metallurgical coke. Between these two deposits, there is the Mississippi River, practically connecting them. A short while back the Chamber of Commerce of the city of St. Louis asked me if I would not undertake to revive the iron industry at St. Louis. To make a long story short, after a long investigation, I said "yes." I got together a modest company and we created a body politic known as the Mississippi Valley Iron Co. We have installed a blast furnace plant at South St. Louis on the site of one of the old properties that used to be in operation there in the days of Pilot Knob and Iron Mountain iron ore activities. A few gentlemen hold a deposit of ore in the northeast county of Iowa. I was one of those and it was my intention and our intention to bring that iron ore down to St. Louis and there smelt it with coke produced from the Laclede Gas. Co.'s plant at St. Louis.

We have been doing it for a year. I very soon saw that there was opportunity for great development at St. Louis and I made up my mind that I would see what could be done toward cheapening the cost of the assembling of the raw materials necessary for the production of carburated iron or pig iron by means of using the Mississippi River. I got hold of Secretary Baker, got him out to St. Louis, took him for a ride on the Erastus Wells harbor boat, showed him the furnace plant, told him that we ought to bring iron ore from the northwest country down the Mississippi River, and told him that the Government had a fleet of boats that they were using for improving the river, and that if I could get those boats would undertake to make the pioneer trip to find out whether the river could be used in its then condition, and, secondly, what kind of a flotilla or fleet should be produced in order to get the best results.

Through the foresight and the assistance of Maj. Gen. Black, who entered most heartily into the plan, I was enabled to get the fleet,

and on a bright July day started north from St. Louis with six steel barges, 160 feet long by 36 feet wide, and a steamer from the lower river, the *Nokomis*, of some 700 horsepower. The amount of tonnage on the barges was something under 4,000 tons. Gen. Black had given me the very best that he had and we went through to St. Paul without any physical difficulty whatsoever, with no delay whatsoever except when we got to the rapids, when we had to hunt around for an old pilot, the last of the rapid pilots, that was left.

Mr. FREAR. When was that?

Mr. GOLTRA. In July. We were held up there about two days. I believe it was explained to me he had gone on a fishing trip. But they found him and we went on through and arrived at St. Paul, and as compared with the railroad rate, made money in the operation, and made money notwithstanding the fact that the fleet was about 50 per cent efficient to what it should have been and what, if the Government turns over this new fleet to me, will be.

Mr. FREAR. How long did it take you to make the trip?

Mr. GOLTRA. Thirteen days.

Mr. FREAR. How far?

Mr. GOLTRA. Six hundred and seventy-five miles.

Mr. SWITZER. How long does it take the average train to make that trip, do you know?

Mr. GOLTRA. About six or eight weeks as it ordinarily runs. If the freight was a through freight it could run on passenger schedule but of course they never do.

We got to St. Paul, gentlemen, and the city of St. Paul, being very much interested, had agreed that they would have the necessary unloading facilities on hand. Instead of having them on hand there had been difficulties which probably it would be better not to mention since this is going into the record. We stayed at St. Paul for about a month. We finally got the coal on shore. It had been intended for the Northern Pacific Railroad, but the city of St. Paul began to see that there was going to be difficulty in getting coal, and that coal was to be about the most valuable thing in the country and they commandeered the coal so that to-day the city of St. Paul as to all of its municipal buildings is being heated and lighted by the coal taken up on that pioneer voyage on the Mississippi River. Fortunate St. Paul.

Mr. OSBORNE. Did the coal come from Kentucky?

Mr. GOLTRA. From southern Illinois, just above the Kentucky fields, steam coal not cooking coal.

In the meanwhile we arranged for the ore to come down from the range, and it was promptly loaded on the barges. I had gotten to St. Paul and noticed that the water was extremely low in the river, and upon inquiry found that the farmers up above Minneapolis and on toward the impounding reservoir requested that those flood waters be not permitted to come down as they wished to cut the wild hay that grows in those stretches where the water runs over going into the channel, and notwithstanding that condition and being under bond to Uncle Sam to return that fleet to St. Louis, we started out.

Mr. FREAR. Loaded?

Mr. GOLTRA. Loaded. We had not gone far when the *Nokomis*, the lower river steamer, the only thing that Gen. Black could let me

have that had any power to it, began to buck. We touched all of the crossings from St. Paul to St. Louis. We did not miss a one. The barges we had no difficulty with. We could lighten the barges to accommodate the situation which was to four feet.

Mr. FREAR. What did the *Nokomis* draw?

Mr. GOLTRA. She drew between 5 and 6 feet. After struggling with the *Nokomis* to the extent of taking everything off of her except as the captain expressed it, the cook and the paint, we finally succeeded in getting her down to St. Louis in the latter part of October, and when we got to Alton the barges were there awaiting us and we hooked up and came into St. Louis, having no difficulty from that time on. The financial result being that all the money that had been made in going up the stream was lost in getting the *Nokomis* back to deep water, and about \$10,000 besides. That is what it cost to get the boat down.

Mr. FREAR. What was the cargo brought back?

Mr. GOLTRA. The cargo brought back was some 4,200 tons of iron ore which I have mentioned.

Mr. FREAR. How long did it take?

Mr. GOLTRA. I can't recall the number of days, but I guess we were about six or eight weeks in getting the *Nokomis* back again.

Now, gentlemen, I want to lay especial emphasis on this one point. The trouble was due to the depth of water which the *Nokomis* drew. That is proven by reason of the fact that Col. Keller here and Secretary Redfield, seeing the situation, with the deep-water boat, took hold with their shallow-water boats, drawing 3½ to 4 feet, and simply moved the barges down, and the barges, as I said, were down there waiting for us to get the *Nokomis* there. The river in the meanwhile, gentlemen, had fallen to the lowest stage in the memory of man, lower than any of the old inhabitants of the valley ever recall its having been. We came down, I repeat, over that 675 miles with the lowest stage of water that there ever has been in the river, so far as history tells us, with no difficulty, comparatively speaking, with our load—the barges were loaded—but with all kinds of difficulty with the deep-water boat. In other words, it was clear that a deep-water boat was not a proper boat for the upper Mississippi in the low-water months of the year, and certainly not the proper boat when the river is lower than it was ever known to have been before.

Mr. FREAR. By way of parenthesis, the *St. Paul*, the largest boat of the Streckfuss line, draws 3½ feet, and loaded about a foot more, as compared with the *Nokomis*.

Mr. GOLTRA. Now, gentlemen, it is extremely fortunate, I hope ultimately, for my pocketbook, but it was not fortunate for my pocketbook at that time, because I was toting the loss financially. But it is very fortunate that this trip was made at a time when that river was lower than it had ever been before. Why? Because it showed all of us just exactly what we wanted to build in order to be able to operate at any stage of water on that river. It was a very fortunate thing that it was as it was.

(Thereupon at 1.10 o'clock p. m. the committee took a recess until 3 o'clock p. m.)

AFTERNOON SESSION.

The committee was called to order at 3 o'clock p. m., the acting chairman (Hon. Charles F. Booher) presiding.

The ACTING CHAIRMAN (Mr. Booher). We will proceed with the hearing, gentlemen.

Mr. GOLTRA. I stated my name as Edward F. Goltra, of St. Louis, and stated that I am a manufacturer.

The ACTING CHAIRMAN. Yes; you stated that; you may proceed.

Mr. GOLTRA. I should state, gentlemen, that notwithstanding the difficulty which we were experiencing in getting the *Nekomis*, the deep-water lower river boat, back to St. Louis at the request of the War Department, they beginning to get short of coal at Rock Island and not knowing what was going to happen, asked me to undertake to get that coal up the river. I undertook it, and we started north with six of the big steel barges and the steamer *Sachem*—the Government steamer *Sachem*, which was a counterpart in every respect of the *Nekomis*, which we were having such great difficulty in getting back to St. Louis. We put aboard some four thousand and some hundreds of tons of coal and proceeded up the river until we got just above the mouth of the Illinois, where it enters into the Mississippi and immediately the *Sachem* began to experience the same troubles that the *Nekomis* was experiencing coming down. I was in Washington at the time, and it being reported to me that they could not get up the river with this deep-water boat I instructed them to get word to the captain in charge of the flotilla that he turn back and see if he couldn't go up the Illinois River, so that we could deliver the coal at the Hennepin Canal. That was done, and he went up the Illinois River without any difficulty whatever.

Mr. SWITZER. How far up? About how many miles?

Mr. GOLTRA. I should say from St. Louis to Peoria is about 200 miles.

Mr. SWITZER. Up the Illinois River?

Mr. GOLTRA. Up the Illinois River. We went up without any difficulty and delivered the coal at the mouth of the Hennepin Canal to smaller barges suitable for going through the canal to Rock Island, and by that means furnished the arsenal and the Government requirements with coal for the winter at Rock Island. So much for the pioneer movements.

I would state, gentlemen, that this was done on a commercial-sized basis. I call it to your attention again that what I was endeavoring to do was twofold: First, to find out whether the river was in a condition that made it and rendered it navigable now, and, second, the trip was made for the purpose of determining just exactly what was the kind of vessel or vessels best adapted for the purpose. Both of the objects sought were accomplished. To my surprise, gentlemen, the condition of the river from St. Louis to St. Paul was very much better than I had any idea. I was like a great many—in fact, like the people of St. Paul, who thought that I would never get through with that enormous fleet.

I questioned whether I would be able to come up, and I was most agreeably surprised to find the good condition of that river. Improvements that were put in over 22 years ago still remain intact in

that river, and in only one place in the entire stretch did I find the revetment rock was out of place and had been undermined by the action of the stream. From St. Louis to the mouth of the Illinois the river is very good. There is no trouble to navigate it at any season of the year when the ice, of course, does not obtain. From the mouth of the Illinois River to Keokuk and the Keokuk Dam there are stretches where a little work wants to be done, such as raising the dams to a greater height than what they are now; also the closing of what they call the chutes, where the river will run around an island—the closing of a chute to make the water go through the main channel of the way.

From Keokuk to Rock Island the river is in very good shape. From Keokuk Lake, caused by the dam that has been built there, you have an ideal waterway for about 50 miles; more water than is needed. At Rock Island, as you know, improvements are under way on the rapids, through which, when they shall have been completed, will undoubtedly make that a very easy proposition to navigate with barges. We had no difficulty in going over those rapids as they are, but they will be very much better when this improvement is finished which is now under way; and that improvement should be pushed and carried out to its ultimate completion as planned.

Mr. KENNEDY. Where did you find the worst reach of river?

Mr. GOLTRA. The worst stretch of the river, I should say, was from the mouth of the Illinois River to Keokuk. The river spreads out there and the dams that have been put in were all right for the scheme as outlined at that time, but they are not high enough now.

Mr. KENNEDY. You mean by that the wing dam?

Mr. GOLTRA. Yes, sir. They simply want to be raised. They are not expensive.

From Keokuk to the head of Lake Peppin the river was very good. At the head of Lake Peppin the muck that has gradually sifted in there makes it advisable that a large and powerful dredge should be put in for the purpose of dredging out that muck and throwing it up on the banks. It is very valuable soil that is there in the river at the head of the lake. From Lake Peppin to Hastings the river gets a little narrow, but it is a splendid river. I was astonished to see these improvements put in years and years ago still there doing duty. From Hastings, at the mouth of the St. Croix River—from Hastings to St. Paul the river has been wonderfully improved; and, generally speaking, gentlemen, the only thing that in my judgment should be done is the raising of these dams and the closing of the chutes in order to insure a very bargable river.

While making the trip, in order that we should get something generally that was worth while, I sent for and received the map of the Mississippi River from the Falls of St. Anthony to the junction of the Missouri River, and as we went over the stream we jotted down each place where the dam should be raised or a chute should be closed, and I have before me the charts, and the Engineering Corps, furnished with the necessary funds, which I am very glad to be able to state would not be large, would be able to start in at once and do their work quickly, and, as I said before, from the mechanical standpoint, easily.

Mr. KENNEDY. Well, you understand, of course, that we make a lump-sum appropriation for the improvement of the river from the

mouth to St. Paul, and the engineers are supposed to use that where it is most needed for the needs of the navigation, and to prosecute the 6-foot channel, which is the ultimate object to be reached?

Mr. GOLTRA. Yes, sir; I realize that the 6-foot channel is the ultimate channel at a zero stage of water; that is ample water to do a tremendous business. I can also state, gentlemen, that considering the tools and implements which the Engineering Corps have had to work with and the appropriations which they have had they certainly have done a wonderful piece of work.

An old man, one evening, as we were going along the stream, asked if he could not come aboard. He came out on a launch and said that he desired to make the trip up to a certain point, as he in the early days had come out there on the river and when they reached that point they had to transfer, as the boat, coming up from below, was unable to go beyond that point because of the stage of the water at that particular stretch of the river. I recall that he stayed with us and in the morning as we were approaching the place he pointed it out to me and he said, "Would you have the captain instruct the leadman to take soundings at this place; I am curious to see what is here?" When we got to the spot the leadmen went to the outer barges, clear forward on either side, and they called out the stage of water, and the best evidence as to whether your Engineering Corps have done well or not can be expressed and stated by simply saying that as we went over the place the leadmen all through that stretch called out "Mark Twain," and "A quarter less Twain," all over it. That was the proof of the work all the way through.

Mr. FREAR. The question is not alone the river's possibilities, but are we utilizing them?

Mr. GOLTRA. Yes, sir. I am addressing my remarks now, Mr. Congressman—I am telling you gentlemen what I found from personal observation by going aboard and staying with it.

Mr. FREAR. Mr. Kennedy and I live on the river. My thought is this: We are anxious to get at the facts, but the question of utilization is the important thing.

Mr. KENNEDY. Let him proceed, and follow with that.

Mr. SWITZER. I have not been on the river, and I would like to have the gentleman proceed in his own way.

The ACTING CHAIRMAN. Let him proceed and be heard fully, and you can then ask questions.

Mr. FREAR. I would like to hear the discussion, but I think it is going to be too long if we are going to have a discussion of what the engineers are doing. I am sure it is not any lack of courtesy for the gentleman addressing the committee, but we have several gentlemen here to be heard, and it is going to make the discussion very long without getting to the main question.

Mr. SWITZER. I don't like the idea that I am entirely ignored. I am not so particular, of course, but I don't want any particular member of the committee to take charge of the committee and say because he has been at a certain place we shouldn't have a description of the river. I was interested in his description of the river. I would like to hear his description.

The ACTING CHAIRMAN. Yes; go on, Colonel.

Mr. GOLTRA. The object in making the observation which I have, Mr. Chairman and gentlemen, seems important to me at this time,

because of the fact that had I found the river in a condition that I could not operate I would not be here talking to you right now; but as a citizen and taxpayer I have contributed my portion to putting the river in the condition that it is now and as I have found it to be, and I want to say that that \$30,000,000, in my humble opinion, has been very well expended. I am very sure of the correctness of my statement. Now, as regards the traffic. That gets down to the question.

Mr. FREAR. Yes, sir.

Mr. GOLTRA. The commodities exist in as great a quantity, and which are required to be exchanged, as in any other spot, I guess, in the civilized world. It is a large statement, but I am prepared to show its correctness. One little thing which I should touch upon—should take the time to do—do you realize, gentlemen, that if we should get into difficulties with Great Britain, where our most serious trouble would arise? It would be with the very thing which we need most, which is iron and steel. Should we get into a conflict (it would be probably within a week's time) these commodities would be shut off from us. We are now bringing down every bit of our iron ore through the Soo Canal. I say, every bit; not every bit, but 99 per cent of it. That is right along alien territory, and an aeroplane and bomb could put us out of business in a very short time, and I pointed out to the Secretary of War when he came out and went over the river with me that it was very material to the American people that we procure a new water route down to and into the central part of the country.

The traffic which I have in mind, gentlemen, is just one thing: To take coal which is at one end of this stretch of the Mississippi River and carry it to the north where there is no coal and where there is a consumption of over 22,000,000 tons a year now (and there did not use to be any), and then take the iron ore which is up there in great quantities and which they have no fuel to smelt and take it down to where the fuel exists. I suppose nothing else, with this exception, that in the winter months, of which there are four that you can not operate in the upper river, I propose to operate this fleet in the lower river; and there, again, is tremendous traffic offering. The enormous deposits of fuel oil along the Gulf of Mexico clear down to Tampico will furnish the commodity coming north. In our own industry at St. Louis we burn about 125,000 tons of fuel oil alone a year. We want to get that cheap oil down there to St. Louis. And there, again, are these almost inexhaustible quantities of coal for tidewater, and we want to take that. Consequently, I recommended to the War Department that these barges be so constructed that they would carry three things—coal, iron ore, and oil—and they are so designed.

Mr. OSBORNE. Colonel, where does the oil come from that you use now?

Mr. GOLTRA. From Oklahoma by rail.

Mr. KENNEDY. I suppose you would figure on getting your ore down during the navigable weather?

Mr. GOLTRA. Yes, sir.

Mr. OSBORNE. And bringing the oil up during the wintertime?

Mr. GOLTRA. And bringing the oil up during the winter.

Mr. FREAR. Would this fleet be able to supply you with ore?

Mr. GOLTRA. This fleet has a capacity of 72,000 tons on one movement, and the experience which we have had in taking up the big fleet, which voyage I have described here, shows us positively—not questionably, but positively—that we can with this new fleet make two trips a month between St. Louis and St. Paul.

Mr. FREAR. And what quantity are you using in your establishment?

Mr. GOLTRA. We are using there now about 175,000 tons of ore in the first furnace that was put up.

Mr. SWITZER. Over what period of time?

Mr. GOLTRA. That is the 12 months. We have under plan additional furnaces which, with the one that we expect to be able to get the materials to construct soon, would require 380,000 tons additional of ore to satisfy it.

Mr. FREAR. That this fleet will supply?

Mr. GOLTRA. This fleet will supply our plant.

Again as to the traffic. Right here in this room now are two gentlemen who have followed me all the way down here from Iowa. They have the public utilities out there, and the most important thing to them is coal, and they are following me to see to it, as I understand it—and they can correct me if I do not speak correctly—that they get in first on coal to be delivered to them at Muscatine, Iowa, and they want 200,000 tons. I believe I speak correctly, do I not, Mr. Smith and Mr. Dows?

Mr. SMITH. Yes, sir.

Mr. DOWS. Yes, sir.

Mr. GOLTRA. So, so far as the traffic is concerned, gentlemen, it is comparable to only one place, and that is the Soo Canal, which has more traffic for a waterway than any other place on the planet.

Mr. SWITZER. I am from Ohio. Our ore comes to Toledo, and from Toledo it goes out practically 250 miles to where it is used and consumed at 8 or 10 pig-iron furnaces; it comes from up in northern Michigan, and we, in turn, send a good deal of coal back.

Mr. GOLTRA. Yes, sir.

Mr. SWITZER. And all that has to be transferred at Toledo from the vessel to the rail.

Mr. GOLTRA. Yes, sir; and at Duluth, also.

Mr. SWITZER. Yes; and that is the reason I think your proposition is feasible. But I am interested, though, with you as when this plan is to be in operation. Can you have facilities to construct these barges soon?

Mr. GOLTRA. Well, Mr. Congressman, I have had the angles and plates and shapes already set aside; I believe they are now rolled and, as the colonel stated this morning, I believe the funds are now set aside, and it is a question of getting men more than any other question, and I think it is the intention of the Army, to whom the matter of the materialization of the fleet has been delegated, to let to people up and down the river, who have boat-building facilities, different parts so that we will have the barges along about July of this present year; the steamers, I don't see how it would be possible to have them in existence until the year following.

Mr. SWITZER. Just one more question: Mr. Keller stated that the steamers would cost about \$300,000. I don't believe he stated what the barges would cost; do you know?

Mr. GOLTRA. I think about \$100,000.

Mr. SWITZER. Apiece?

Mr. GOLTRA. Apiece. They will cost more than twice as much as they would have cost several years ago.

Mr. FREAR. What will be the total?

Mr. GOLTRA. \$3,360,000; that is the amount set aside.

Mr. FREAR. For this particular purpose?

Mr. GOLTRA. Yes, sir.

Mr. FREAR. Are any other contracts being proposed?

Mr. GOLTRA. Not that I know of. I am speaking about this thing because, with this thing a success, you will see a great many boats on that river, eventually.

Mr. OSBORNE. This furnace, you say you have, has a capacity of 175,000 tons?

Mr. GOLTRA. Yes, sir.

Mr. OSBORNE. And you are putting in facilities for—

Mr. GOLTRA. Approximately 550 tons a day, which requires 1,100 tons of ore, as it requires 2 tons of ore to make 1 ton of pig iron. So we would require an addition to the 175,000-ton furnace, which is now in blast.

Mr. OSBORNE. Making something more than 500,000 tons?

Mr. GOLTRA. Yes, sir.

Mr. OSBORNE. And they want 200,000 tons?

Mr. GOLTRA. These gentlemen are talking of trying to get me to deliver 200,000 tons at Muscatine. In addition to that, gentlemen, the Northern Pacific Railroad—in fact, all the railroads up North are now very much interested, and they desire—in fact, we have a tentative plan that they take on 500,000 tons for themselves alone. The amount of the traffic is simply enormous.

Mr. FREAR. How do you account for it, Colonel, that there is not a single ton of coal or ore carried on this river at this time?

Mr. GOLTRA. The 3-mill per mile rate on the Burlington Railroad explains it more than anything else; in that connection—it is digressing a little bit—

Mr. FREAR. It is very important.

Mr. GOLTRA. You can have any man, especially Mr. Clifford Thorne, of your State, Mr. Smith, come up and point to the Burlington Railroad and the dividends they are making. The reason, gentlemen, they are making the dividends there is because the people who put their good, hard-earned money in in the past to build the various parts of this system of road, and they failed and were sold at 25 or 30 cents on the dollar, and they finally were put in the whole Burlington system, and that particular system has as a result an issuance of paper so low per mile—on the Burlington system—that the rates which obtain are sufficient to make a very handsome profit and return on that, but don't you see confiscation was going on? It was not fair; it was not honest. If the Burlington system had the paper issued against it at what it has cost to materialize the system, it might be talking now about going into the hands of a receiver.

Mr. FREAR. There are one or two other railroads in Illinois that have a history.

Mr. GOLTRA. That is very true; but, as I stated this morning, gentlemen, we have certainly been fooling ourselves.

I want to say one more thing about this fleet. Had I had, when we started down the river, with the water lower than ever known in history, this fleet which they are about to build for me, we would have come down from St. Paul to St. Louis in about six days' time. There is no question about it at all, gentlemen, and I will tell you why. It is as simple as A, B, C. These four steamers are going to draw 3 feet of water when they have 30 hours steaming radius of coal aboard. It is about so much water [indicating], and when they are loaded down to 4 feet they will go from St. Louis to St. Paul and back again and carry their own coal with them and draw only 4 feet of water. They are spread out and are built for the kind of a river that we found, and put up the money to find, would be a success; that is all. If I was going to take this new fleet and start up Mauristerre Creek in Illinois, which runs through Morgan County, where I was born, I know I would have the same trouble that I had with this boat drawing upward of 6 feet of water and only about 4 feet of water to float it in.

Mr. FREAR. I understand there is no such boat in existence to-day.

Mr. GOLTRA. There is no such boat in existence today. Reverting again, Mr. Frear, to the Army engineers, they have been going along in one way and another improving that river and they have gotten it to that degree of improvement and betterment that we can now do something. I was surprised, as I said before. For instance, the worst place in the river used to be at Keokuk, but I am happy to know that in the last few years that has passed.

Mr. FREAR. This may surprise you. Colonel, but two years ago I came down the river, and we stuck for 14 hours in the river below Keokuk. Gen. Black said that was the best part of the river.

Mr. GOLTRA. I don't doubt it; but I am speaking about above the dam. The only difficulty I can see, gentlemen, we are going to have is pilots. They have died out and gone. We really didn't have a pilot from St. Louis to St. Paul; and in that particular my idea is to railroadize the river, so to speak; to divide it into divisions and let the pilot travel 150 or 200 miles and then get off and go back; he will not try to know 600 miles, but he will know 150 or 200 miles, and he will know it so perfectly that he can go through it in all kinds of weather; and we can operate at night without any difficulty whatever.

I will not add anything to the matter of tonnage, gentlemen, because one simply has to state it in the manner I hope I have stated it in order to have it present its own argument. The traffic is there; enormous.

Mr. FREAR. This traffic will be built up, or is the traffic there to-day which is carried by rail?

Mr. GOLTRA. We have been bringing down all by rail. For that reason our costs to produce pig iron at St. Louis are higher than I want to see them. And the reason I have taken hold of this matter is not entirely altruistic, I assure you. I saw we would have to increase the rates to the railroads, and I couldn't live with a greater rate on me, so I began to look around, and where do I go? I go to the river. Now, the cost to take a ton of coal to St. Paul—the cost per ton per mile, that is the crux of the whole thing. I am in position to say to you that I know what it costs, provided that I know

what the engineering corps of the Army are going to do to me in the contract that I will enter into with them for this fleet. I have nothing to conceal in my operations and my proposed operations at all, and I am going to say to Uncle Sam's representatives, "I want that fleet on a lease of 20 years' duration; I will pay Uncle Sam's representatives 4 per cent per annum on the ordinary cost to materialize that fleet, during war times. I will keep that fleet in proper maintenance condition, and I will utilize the fleet continuously, but I shall respectfully insist that I have the option at any time during those 20 years of the life of the lease to call for a then appraised value of that fleet, and, upon the appraisal being made, I to have the privilege of handing Uncle Sam the value in dollars for that fleet so appraised, and then it comes over to me in fee simple." Now, why do I put it that way?

Mr. FREAR. Do you figure depreciation in that?

Mr. GOLTRA. Why do I put it that way? Simply because I know, gentlemen, that the fleet is going to cost twice as much to build now as in ordinary times, and I can not carry the burden of the proposition. I am not big enough—I wish I were—but I am not big enough to carry the extra load due to this enormous war cost which will enter into the materialization of the fleet; and I believe that as a citizen and as a taxpayer that the proposition that I make to Uncle Sam is a proper one and is a fair one, because if, as a result of my pioneer work, we go ahead and we get this traffic established on that river and I make money—and if I do not make money it will not be a success—and if I make money there will be other boats that will be established on that river, Judge, and there will be a whole lot of them. I do not hope to do the whole thing or monopolize the river. I would not undertake to carry all that is to be carried on that river; therefore I think it is proper, in view of that fact, and we have the precedent in what the Government did in the way of giving aid to get the railroads built when we were having a war among ourselves here, getting the railroads to the Pacific coast, then I think it is just, in view of the trouble we are having to get coal to the Northwest country, that Uncle Sam assist me in purchasing a fleet when the appraisal charge is the amount that I am willing to pay and thereby be relieved from taking the burden of this heavy war cost to build the fleet now.

Mr. FREAR. That would be, wouldn't it, Colonel, the cost of reproduction at the time you propose to buy?

Mr. GOLTRA. Yes, sir.

Mr. FREAR. That is, you don't propose to pay for depreciation and use?

Mr. GOLTRA. No; because we have to keep them up.

Mr. GALLAGHER. Suppose he made a contract for 20 years; there is depreciation in that time?

Mr. GOLTRA. Yes; but I have to maintain it.

Mr. GALLAGHER. But even with maintenance there is a depreciation; there is wear? There is a wearing even with first-class maintenance?

Mr. FREAR. My suggestion was the cost of reproduction. That is the real test.

Mr. GALLAGHER. That is not the point I make.

Mr. FREAR. No; I understand.

Mr. GOLTRA. The only thing you have to guide you, gentlemen, in that particular is the experience of the Government with the iron and steel steamers which it now owns. The depreciation of them on the river is very, very slight. You don't have any heavy seas. You don't have the severe conditions that you would on the Great Lakes or that you would on the ocean. The boat that I had—the *Nekomis*—her boilers were 22 years old. I was using these same boilers, two flues, and the boat was twenty-odd years of age; it was an old boat and old style and very expensive of operation, and yet there the boat was, and I believe they have marked her off the books now; it doesn't appear as an asset for Uncle Sam; but there it is, and to-day you could sell it, if it was in proper form, for about four times what it cost to build her. So all we have to guide us would be the boats on the river. If it was salt water, that eats into the steel and iron, it would be different; but it isn't. So that is my proposition. If anybody objects to it, all right. If they can do anything better, all right.

Mr. FREAR. Do you propose to lease for any particular term of years?

Mr. GOLTRA. Yes, sir.

Mr. FREAR. Would you give a warranty?

Mr. GOLTRA. I give a warranty.

Mr. FREAR. A bond?

Mr. GOLTRA. I use the boats and maintain them—

Mr. FREAR. We are going to assume it is a success, but suppose it isn't. Suppose at the end of a year, or two years, you don't keep it going?

Mr. GOLTRA. If I don't keep it going; if I don't do what I say, Uncle Sam will lose every dollar he puts into it, except the boats.

But these barges are so built that they can be used on the Gulf of Mexico, or Uncle Sam would be able to use these boats on the river improvement work. But if this is not going to be a success, gentlemen, I object to spending any more money on the river, and in no feeble manner, because it would be foolish for us to spend any more money. I will say, further—a little digression—that I have gone from Keokuk, Ia., to Memphis, Tenn., with the Hon. Theodore Roosevelt, when he was President—

Mr. KENNEDY. I was on that trip.

Mr. GOLTRA (continuing). We were wined and we were dined and had a glorious trip, but nothing ever came of it; and then we went to work and got up a wonderful trip—Mr. James A. Smith and others—for the Hon. William H. Taft, and we were wined and we were dined on that trip—St. Louis to New Orleans—and nothing ever came of it, and I made up my mind that I was going to find out whether it was worth while to continue with this waterway improvement or not, and I have found out.

Mr. FREAR. And you think the river is in good enough condition now to give a good test of that?

Mr. GOLTRA. Yes, sir; I think we better spend \$3,500,000 now and find out whether our \$30,000,000 expenditure was worth while. Uncle Sam could afford to throw that over and give me the boats in the end.

Mr. FREAR. Do you think you could do that with the present railroad rates?

Mr. GOLTRA. Yes, sir; I was coming to that.

Mr. SWITZER. You think this traffic will continue?

Mr. GOLTRA. Yes, sir; I have ideas about that matter that will interest you. At first you may disagree with me, but on reflection I think you will agree with me. The cost per ton per mile: If I can eventually purchase this fleet for \$1,700,000 that has cost \$3,360,000, that money will cost me 6 per cent per annum—that is \$283 a day. I know the number of men that are going on that boat to operate it—I am speaking now of one boat—and I know how much they will cost and how much they will eat; that will cost me just \$36 a day.

Mr. FREAR. That is on the whole fleet?

Mr. GOLTRA. No, just on one boat of the fleet—one of the flotillas. I know that we will burn $1\frac{1}{2}$ tons of coal every hour and I know what that will cost, which will be about \$54 or \$60 for the coal, in ordinary times.

Mr. GALLAGHER. Is not that figuring a little low?

Mr. GOLTRA. No, sir; because my scheme contemplates creating a body politic to be known, for instance, as the Mississippi Valley Transportation Co., and that transportation company will take over a railroad, the control of which I have secured—the option on the railroad—that railroad will bring over the coal from the mines, 25 miles down to the river, and the cost in the matter will be the cost of raising the coal and putting it on board the boat.

Mr. GALLAGHER. It isn't figuring the value of the coal at all?

Mr. GOLTRA. No, sir; I am simply taking the actual cost; that would be \$1.50 a ton; it would be \$54 a day. In that connection, gentlemen, it may seem to you that I am speaking with a great deal of positiveness, and I am. I know how many men will be on that boat, because you can station them around to their places with the drawing in front of you; I know what they will cost. Any engineer can tell you that if you have a certain boiler equipment and steam outfit how many tons of coal that you will burn in order to get a certain energy out of it; you are not guessing; there are no "ifs" and no "ands" about it. All the "if" was displaced by making this trip up with the full-sized fleet. So we know the amount of coal we are going to use. So, knowing the number of tons of coal we will burn, and knowing the number of tons the steamer will push up the river; knowing the speed at which it will travel up the river, and knowing the number of miles it has got to go, all of them fixed, certain items, it is very easy to translate them into an item of the cost per ton per mile at the beginning.

I will say, without naming any specific figure, that it is immaterial to me whether the railroads are granted an increase of rate or not. As to whether that I can make a success of moving coal north to St. Paul and bringing ore south I am positive.

I will say in conclusion, gentlemen, that this war that we are engaged in on this planet will be over some time, and then will come a commercial war such as we have never experienced before. It is of prime importance to us—we American people—that we take steps to get out of the inefficient and uneconomical methods of doing things which we have been doing in the past, and there is nothing that, as a manufacturer, I know of where we can make a greater step forward in doing things more efficiently, and therefore more economi-

cally, than the matter of taking these great coal deposits and transferring them by river to the north and bringing back those great ore deposits by the same river as a return cargo.

Mr. FREAR. Do you believe, Colonel, that could be utilized by anybody else that had no manufacturing plant in St. Louis? I am trying to get at the disinterested expense of handling it.

Mr. GOLTRA. Mr. Frear, of course, if the commodities are not to be used at the two ends——

Mr. FREAR. Assuming they are going to be by someone?

Mr. GOLTRA. Well, assuming they are going to be used—I guess I don't understand your question.

Mr. FREAR. Assuming there would be a demand. Of course, you are using them in your own business, where you can utilize them; but I say, where they are brought for general use, the ore to St. Louis and the coal to St. Paul? Could that fleet be operated successfully?

Mr. SWITZER. Can a man make a profit operating it?

Mr. FREAR. Yes; that is it.

Mr. GOLTRA. Well, what is he going to be allowed to charge? Three mills per mile per ton?

Mr. FREAR. What I am getting at is, if we ought to make the railroads raise their rates in order to turn the traffic to the waterways, providing that it is not raised above other points?

Mr. GOLTRA. Mr. Frear, will you permit me there, not offensively, but respectfully—I do not refer to you—but we American people have been thinking along lines getting the cart before the horse. We do not want to make the railroads increase their rates to make the tonnage go by river.

Mr. FREAR. That is what is done in Germany?

Mr. GOLTRA. But what we should seek is to have the railroads receive such a rate as will keep them in the highest state of efficiency and able to transport commodities when called upon to do it. The point I make is, that when you do that you will not get 3 mills per mile per ton on coal from southern Illinois.

Mr. FREAR. And that will be brought about by diverting the heavier traffic to the waterways?

Mr. GOLTRA. Yes, sir; and now it is going to work itself out, for I see already under Government operation we get a deficit of twenty millions, and you and you and all of us that have any property taxable will have to dig up to pay this deficiency by the Government to the railroads.

Mr. GALLAGHER. Wouldn't it be fair to make them make uniform rates instead of rates favorable to river towns?

Mr. GOLTRA. Absolutely, Mr. Congressman. The rate sheet now is about as idiotic as the people's regulation of industry, and the handling and control of it for 25 years. Now, I am very much interested in these railroads doing well. I am not a railroad man, but as a trustee for one of the banking institutions in St. Louis, it became necessary for me to take the vice presidency of a railroad out West, and the first thing I did when I found out the situation that obtained in the rates was to request the court to let us take up the rails and sell it, because every pound that was hauled we were losing money, and the court finally granted the request, and we have taken

up the rails and it was sold. The people out there made a tremendous howl, of course, but the rates were such that it didn't pay us to hire the engineer and the fireman and buy the coal and the grease and the waste, and we were face to face with the proposition and had to do the best we could for the people for whom we were trustees. The embankments are there yet, but that is all that is left of the railroad.

And there are other railroads going the same way. We are fooling ourselves. We have them (the railroads) crowded down to the point where they can't do anything at all. I don't know what would have happened, gentlemen, to our country if the President hadn't taken over the railroads. You know they are not owned by the people who are the presidents and general managers. They are owned more by you and you and the fellow that has any insurance policy; we are the ones that own them, unwittingly, and we have been certainly fooling ourselves.

MR. GALLAGHER. Well, you and you and you have nothing to do with or to say about the way in which these railroad properties have been juggled. It has been wholly in the hands of these people.

MR. GOLTRA. No. And we have arrived at a point where the paper that has been issued as representing the ownership of them was so thoroughly discredited that by the crash that was just before us would have made the most severe panic we have ever had look like a zephyr compared to a whirlwind. We would have gone all to pieces.

I would be glad to answer any questions.

MR. SWITZER. You stated some time ago you were going to make some suggestion about improving some part of the stream; I wanted to get your idea.

MR. GOLTRA. Oh, yes; what I had in mind was this, gentlemen: I am inclined to think that probably a little later on I had better make a proposition to the Congress to undertake the maintenance of way of the river between St. Paul and St. Louis, the strip over which I propose to operate being paid for keeping that river open, a reasonable sum for the time and labor and energy, and so on, put into it.

MR. FREAR. That is, just for maintenance?

MR. GOLTRA. Yes; that is for keeping it open; not talking about a deeper river, but keeping it open; and that is not a novel or new thing, and it has not originated with me. That is the way England has found to be the best way to do. They have a private concern, and generally it is let to the one who wants the river open most, because it is felt that his pocketbook will impel him to do the best he can to keep it open.

Now, as to the plan: My idea is to have, say, four of the No. 5 and No. 6 dredges. This is a dredge that in 30 minutes will go right through a deposit of material and let you go on. Have four of them and divide the river into four divisions between St. Louis and St. Paul; have a boat similar to what they have now but equipped with outriggers having a spread of 200 or 250 feet and having men stationed with their lead lines at, say, 50 feet apart, and have the water patrolled the same as you do a railroad track, and wherever there is anything wrong, where a spike is out, so to speak, or a splice bar loose, fix it then. The doing of that thing, gentlemen, will improve the river and keep improving and improving it right along. It is a

very much better river now than it was when we went over it, because as we went over and through it we knocked off a ledge or a bar, and it is a better channel. The using of it will improve it.

Mr. FREAR. Just in a general way, what would be your idea of maintaining the channel in its present state?

Mr. GOLTRA. Mr. Frear, I haven't gotten that far.

Mr. FREAR. The reason I asked that, I have figures given me by captains of boats, and they say something in the neighborhood of \$350,000 would accomplish what we are spending five times as much for.

Mr. GOLTRA. I am not prepared to say, but it would not cost much.

Mr. SWITZER. What dredge have you in mind?

Mr. GOLTRA. The same as the 5 or 6 used in the lower river.

Mr. FREAR. The suction dredge?

Mr. GOLTRA. Yes, sir.

Mr. SWITZER. The hydraulic dredge?

Mr. GOLTRA. Yes, sir. I don't see how they have gotten anything done. I congratulate the engineers. They have a thing up there. Why, even we would have scrapped it long, long ago. It was simply eating up coal and wages, and yet that engineer DeCheen had a right good river. I can say, gentlemen, I was surprised at the condition of the river. Certain it is that with this equipment I propose to take hold of we will make a surprisingly good showing.

Mr. KENNEDY. Mr. Chairman, we have two gentlemen here from Iowa. I think Mr. Smith does not care to be heard, but I think Col. Dows wants to be heard a few minutes.

Col. Dows I don't think I have anything to add; I would be glad to answer questions.

Mr. KENNEDY. We would be interested in hearing you on your coal problem.

The ACTING CHAIRMAN. We would be glad to hear you if you have anything to say.

STATEMENT BY COL. WILLIAM D. DOWS, OF CEDAR RAPIDS, IOWA.

Col. Dows. I just want the indulgence of the committee for a few minutes. I live in Iowa, there, and I think it is of the utmost importance, the improvement of the river, to the State of Iowa, and what obtains to the State of Iowa obtains to all the States in the Mississippi Valley. I listened this morning to Col. Keller. What we need in Iowa and the Mississippi Valley more than anything else is transportation. We have different railroads, and while the population was small the railroads took care of more than the population demanded. I think that is the reason that the traffic on the river went down; I think that is the main reason. Now, as the population has grown and the industries have multiplied there has been such a demand for transportation that the railroads have not been able to give it to us in such manner as we would like to have it, even irrespective of rates; if the rates were one-half what they are now we couldn't get our stuff.

Now, one of the greatest means of transportation in that valley is this river. Take it heretofore in our case; I can remember back 15 years ago, about, we were using 15,000 or 20,000 tons of coal for Cedar Rapids alone. We will use this year 130,000 tons, and yet the

transportation facilities by railroad are no more than they were 15 years ago. So, consequently, what we are suffering for there is lack of facilities, and I believe the opening of this river will very materially increase the means of transportation.

Mr. FEAR. I will make the suggestion there, for fear Mr. Dows misunderstood the discussion, that the railroads had driven the boats off the river.

Col. Dows. No; they came in there and they ran the whole 12 months, and we used to get in coal, and everybody used the cars for storage and everything of that kind, and it wasn't necessary to get in coal in advance. Now, back 8 or 10 years ago, if we had 8,000 or 10,000 tons of coal on hand in storage we thought we were tremendous; we were almost the biggest fellows in town; but we got our coal in every day on the railroads, and if they brought in too much it could be left on the cars. That was the condition, not only in our business, but everybody's business in that country. But the conditions have changed now, and I believe the business men have got to see that and approach conditions as they are.

What I mean by that is this: That if we could in the summer time get a means whereby we could get a hundred thousand tons of coal that we could store in the summer time for use in the winter, we would relieve the railroad companies of that 100,000 tons, and that is practically over 2,000 cars. We would relieve the railroad companies of all that burden at that time, because they have got all that they can do now, and all they will be able to do for a great many years to come, because even though you have the finest of track and equipment, you can only get so many trains for a certain length of track. Now, I think that because I have spent my life in the railroad business; I know that the transportation facilities are not sufficient, even with all the railroads.

Mr. GALLAGHER. As a general thing, we find that the harbors at the rivers are shut off by the railroads, and it costs more from barges up over the track than it would by paying the difference and shipping by rail and taking it more handily.

Col. Dows. I don't think so now.

Mr. GALLAGHER. We found that condition in many places.

Col. Dows. If one would take the facilities for unloading coal, they can do it. Say, for the sake of the argument, we unload at Muscatine; that is 60 miles, or about that, up the river. Now, that could be unloaded by one of these big clamshells a good many tons at a time, and then that would go through on the intrastate basis.

Mr. KENNEDY. They have a modern terminal at Muscatine?

Colonel Dows. Muscatine has a good terminal.

Mr. KENNEDY. I think within the last year they have provided a river terminal there.

Mr. GALLAGHER. I was speaking generally. I thought, being a railroad man, he would know.

Col. Dows. No; you would not rig up for that until there was a demand for it.

Mr. GALLAGHER. What I wanted to get at was that these harbors are nearly all shut off by the railroad tracks.

Col. Dows. Yes; but I think that could be arranged. These cities of Davenport and Muscatine own their tracks, and I think that could be arranged.

Mr. KENNEDY. Now, Colonel, as I understand you, if we had the river fixed up and facilities for transporting coal, you people would be in a position to get your fuel in that way?

Col. Dows. Most assuredly we would. I am talking that it is a benefit to the whole State of Iowa to open this up. Why? Because we need additional transportation facilities—that is all there is to it—on account of the growth of the country, and it is growing all the time, and the growth of the industries. I remember the town I live in when it had only 2,500 or 3,000 people; something of that kind; it is a town of nearly 50,000 now.

Mr. KENNEDY. And the building of railroads has not kept pace with the increase of the commerce of the country?

Col. Dows. Mr. Kennedy, you live in Iowa, probably were born there.

Mr. KENNEDY. I was born where I live now.

Col. Dows. I was born across the street from where I live now, so I haven't moved very far. That whole country is growing so fast—the manufacturing industries and everything of that kind—it seems to me that what we want is transportation facilities and then transportation facilities. As Col. Goltra says, and Mr. Frear, it isn't going to cost much when you figure out the whole valley. It is a mere pittance; and if this is a success, it will be of the most inestimable benefit to the State of Iowa, and you know it, Mr. Kennedy; isn't that true?

Mr. KENNEDY. That is true, if you provide proper terminal facilities to load and unload expeditiously and economically.

Col. Dows. Here is another thing: Running down onto the river are a great many branch lines of railway—branch lines of the trunk lines. You have it right in your country. It would seem to me possible—and I want to reserve the right to change my mind—that, say, Davenport, would not be the place we would want to unload our coal; they have the big tri-cities and an immense junction. Muscatine is a much smaller city; they have a branch line running out of there, so that we can get our coal into Cedar Rapids without going on the main line at all. That branch line has not made any money. In Lee County there is a branch line that you can go on and miss the main line. In Anamosa, in Jones County, you can go on a branch line. In Bellevue, in Jackson County, the same thing obtains on the western line, where you can keep a lot of this out of the main junction points where this congestion happens.

Mr. KENNEDY. Where cars are held up and the trains delayed?

Col. Dows. Where cars are held up and trains are held up. That is an important thought; and follow down where there would be the least resistance from the small town.

Mr. KENNEDY. Mr. Chairman, Mr. Smith, of Cedar Rapids, is here with Col. Dows. While here Mr. Smith would like to be heard for a few minutes.

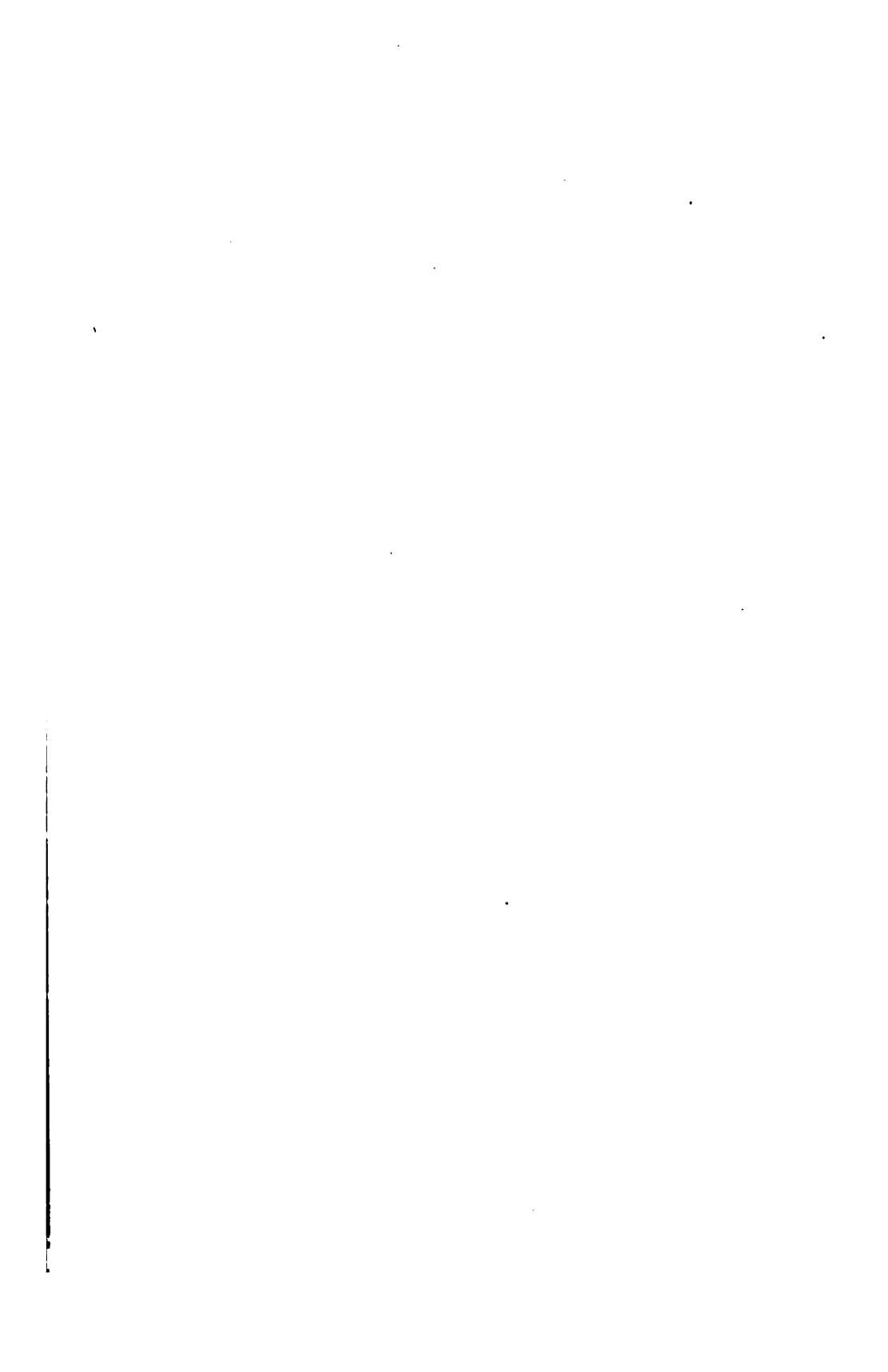
The ACTING CHAIRMAN. We will hear Mr. Smith.

STATEMENT OF MR. ISAAC B. SMITH, OF CEDAR RAPIDS, IOWA.

Mr. SMITH. I am here because of an accident. A very few days ago I happened to meet Col. Goltra in Chicago, and inadvertently he referred to this matter that is under discussion in this committee.

Mr. Dows and my associates and myself are engaged in the public utility business in the State of Iowa. We are supplying power to a large number of people; we are supplying power every day to industries that have a large Government contract. It is absolutely necessary from the standpoint of the conditions that now prevail that we run whether we make any money or whether we do not make any money, and when Mr. Goltra outlined this proposition to me I forgot everything else except just my desire to come down here and, from the standpoint of my own business, to insist and urge that a matter of this kind be given the most careful consideration. The thing of importance was touched upon by Col. Keller this morning. He spoke of the increasing demands for power, and the increasing demands for power perhaps are going to be in somewhat the situation that the railroads are in. We are told, on the one hand, not to make any expenditure; we are told by the bank not to borrow any money, and if we do borrow any money we have to borrow it at a rate nearly double that of normal times, and yet the colonel was here and says that the fabric of our industry is going to break down because we are short of power. We are in the same condition as the railroads. Now, we furnish the power and we strengthen ourselves in our credit if some such thing as Mr. Goltra advocates can be put forward.

The ACTING CHAIRMAN. Gentlemen, the committee wishes to thank you, collectively and individually, for coming here and telling us what you have to-day.



KEY WEST HARBOR, FLORIDA

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF KEY WEST HARBOR, FLORIDA

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 14, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

KEY WEST HARBOR, FLORIDA.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Washington, D. C., Monday, January 14, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small presiding.

The CHAIRMAN. Gentlemen, Mr. Sears and Mr. Powers wish to be heard by the committee this morning. Unless you gentlemen have some preference as to who should proceed first, we will hear Mr. Sears.

STATEMENT OF HON. WILLIAM J. SEARS, MEMBER OF CONGRESS FROM FLORIDA.

Mr. SEARS. Mr. Chairman, as I understand it, the policy of the committee will be somewhat as it was last year as to new projects. Of course, Florida has many worthy projects that should be in the bill, and I have always and shall continue to take the position that because we are in war we should not stop our river and harbor improvements, and the more I talk with gentlemen who have been across the waters about the improvements they have made in their canals, rivers, and harbors over there since the war began, the more I am convinced that the attitude of those who have advocated river and harbor bills has been correct. But unless you intend to take in those new projects, of course, it would be useless to take up your time on those lines.

The project that I expect to take up this morning is the Key West proposition, which was submitted last year as an amendment but lost—

The CHAIRMAN (interposing). Suppose you state the substance of the recommendation.

Mr. SEARS. Mr. Chairman, it is not my desire to take up much time of the committee. Unfortunately, I have been forced to speak before the members of the House on the Key West proposition several times, and have gone into it fully both from a strategic standpoint and from a commercial standpoint, and therefore I believe the members of this committee are somewhat familiar with same, and perhaps know more about the project than I do.

I simply, as briefly as possible, want to urge upon the committee the necessity of doing something for Key West. I believe the time has come when, instead of sending through one or two ports of the country our exports and receiving the imports likewise through those same ports, we must branch out, or we may always expect congested conditions. Therefore, I simply want to read to you briefly some extracts from the reports. First, on page 2 of the report given by

the Secretary of War, section 4, signed by W. M. Black, brigadier general:

After due consideration of the above-mentioned reports, I concur in the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore report that the improvement by the United States of Key West Harbor, Florida, with a view to removing the middle ground is deemed advisable to the extent of widening the channel opposite the wharves to a width of 800 feet and a depth of 28 feet at mean low water at an estimated cost of \$232,700. The first appropriation should provide \$150,000 and authority to enter into contract for the full amount of the estimate if satisfactory bids are received, or to purchase, construct, or hire a suitable dredging plant, and do the work therewith, if it is found that an advantageous contract can not be made; the balance of the estimate to be appropriated as needed.

On the following page, section 3—I would like the members to pay special attention to this:

Opposite the city front is a submerged reef, referred to as the middle ground, which restricts the width of the inner harbor, particularly in front of the Malory Wharf. The improvement apparently desired is the removal of a strip along the eastern side of this reef to a depth of 25 or 28 feet at mean low water to permit the large vessels that now frequent this part to maneuver with greater safety in approaching or departing from the wharves. The present available width for a depth of 19 feet is about 500 feet and for a depth of 24 feet about 400 feet. The largest vessel now in regular use at these wharves is nearly 450 feet in length.

The vessel, in other words, is longer than the 400 feet width of 24-foot depth channel and only lacks 50 feet of being 500 feet at 19-foot depth, the entire width of channel. So you can see the difficulty of those vessels coming in and going out of Key West, and I am reliably informed that often in swinging, in spite of all they can do, a large vessel will drift, and will land on this mud bank or soft reef and stick so fast that it takes several tug boats to pull it off and sometimes blocks that port for several days.

On page 4, section 6:

Key West has been growing in importance as a commercial port, and vessels regularly engaged in trade, as well as those making occasional stops, have been increasing in size. The larger ones now find difficulty in maneuvering to or from their berths because of insufficient width. Groundings are not of infrequent occurrence, and as the bottom is generally of rock these groundings are fraught with more than ordinary danger. It is believed that some additional width is required to keep pace with the expansion of commerce and that the project proposed by the district officer is well adapted to meet the needs of the locality. The board therefore concurs in the opinion of the district officer and the division engineer that it is advisable for the United States to undertake the additional work contemplated by estimate (b) above at a cost of \$232,700. The first appropriation should be \$150,000, with authority to enter into contract for the full amount of the estimate, if satisfactory bids are received, or to purchase, construct, or hire suitable dredging plant if advantageous contract can not be made, the balance to be appropriated as required.

This is signed by Frederic V. Abbot, colonel, Corps of Engineers, senior member of the board.

On page 9, I would like to call your attention to this fact for a moment, which, to my mind, is one of the most important features: In 1906, the tonnage was given as nothing. That does not necessarily follow there was no tonnage, but I presume no figures were kept, which is perhaps the case. In 1907, the tonnage was 189,258 tons and no value; skipping 1908 as that year was practically the same as 1907, we find in 1909 the first tonnage and value as given was

129,125 tons, with a value of \$15,878,120; in 1915, which is the last given by this report, 1916, and 1917 not being given, the tonnage was 946,736 tons, with a value of \$26,026,547, or practically twice the tonnage in 1915 as in 1909, showing the wonderful and marvelous increase in the tonnage at that port.

Mr. FREAR. May I interject right there in your remarks, so as to make it a part of the record?

Included in the total of 946,736 tons, however, are 230,400 tons of water brought in by rail and distributed to vessels at the railway pier and by barge, and 365,900 tons of paving and roadway rock and sand dredged in Man-of-War Harbor and barged to the railroad dock for distribution by rail and by team. Deducting these two items from the total, we have 350,436 tons, valued at \$25,797,647, as the actual incoming and outgoing freight tonnage of the port for the year.

Mr. KENNEDY. Is not part of the tonnage made up of ferry traffic down there?

Mr. SEARS. I was going to come to that. I will say to Mr. Frear, in order that he may thoroughly understand it, that the citizens of Key West have been trying to overcome this tonnage of water. If they could do that it would flourish as no other city in the United States would flourish, but notwithstanding they have spent thousands and thousands of dollars and are still working on the proposition, no engineer has ever been able to get water for Key West, and those conditions will exist until that can be corrected. I will say now it has never been my desire to mislead the committee. We have been working, however, in conjunction with the Florida East Coast Railroad to secure a pipe line along this cross-ocean railroad, and if that can be done, while it will cost hundreds of thousands of dollars, then Key West will have right at her door fresh water and will not have to haul this water.

Mr. FREAR. What is the ferriage?

Mr. SEARS. The ferriage consists of two large ferries, constructed for the purpose of handling the East Coast freight and passenger service. In other words, you can take the sleeper at New York, and when you reach Key West the engine is cut off and the entire train is backed on this ferry. Then you are carried over to Habana and backed up to the railroad, and the engine is hooked on and the train pulled off. That is the case with those freight and passenger cars—one for freight and the other for passenger cars.

Mr. FREAR. How far is that?

Mr. SEARS. About 90 miles.

Mr. FREAR. About the same as the Milwaukee ferriage?

Mr. SEARS. I believe, Mr. Chairman, if the figures for 1916 and 1917 could be given, it would show another increase, because there is no doubt but what the exports and imports through Key West are growing rapidly each year, and that is made possible because of the completion of this railroad. For years and years Key West was cut off from the mainland; but now, having a railroad, each year the tonnage has gradually increased. It is also important from a military and naval standpoint, for if we should get into trouble it is the nearest point in the United States at which we could embark troops to send to the Panama Canal. I do not know whether you have considered that, but it is worth thinking about.

The CHAIRMAN. This commerce to Key West and the Indies, the Caribbean Islands, and Cuba is perhaps the most important commerce in the port, more important to the country than even coast-wise and foreign commerce across the seas.

Mr. SEARS. In that connection, I will say the importance of Key West is a matter which the members of the committee and Members of Congress should now recognize, and we should make this appropriation to prepare for the future. We have been criticized because we did not do so in the past. I happened to find a report, dated March 24, 1913, Sixty-third Congress, second session, made by Capt. Hayden, of the United States Navy, on pages 10 and 11, paragraphs 6 and 20, you find as follows:

6. The remarkable and unique location of Key West, its naval command of the Straits of Florida and the Yucatan Channel, and thus of the entire Gulf of Mexico, its commercial and trade importance as the nearest railway terminal to all of the West Indies and Central and South America, all combine to make its future importance such an absolute certainty that immediate action to build the proposed inclosed naval basin and breakwater would seem imperative.

20. It is very likely that our next great naval battle will be fought in these waters about Key West, or between Key West and the Panama Canal. That battle is going to convert about half a billion dollars' worth of dreadnaughts into junk and make the loser sue for peace at any cost of treasure, territory, and prestige. The efficiency of this naval base at Key West may determine the result of that battle.

The above, perhaps, has nothing to do with river and harbor improvements. However, you are all familiar with the part Key West played in the Spanish-American War and I am satisfied the memorandum made by Capt. Hayden, in 1913, impresses you of the importance of Key West from a strategical standpoint.

Years ago, only small ships plied into Key West. They did not encounter much difficulty and could properly take care of the commerce at said harbor. However, this commerce has grown to such an extent, the small boats are no longer able to take care of it and it is not safe for the large vessels to touch at said port, as is shown by the following from the report of Lieut. Col. W. B. Ladue, Corps of Engineers, pages 10 and 11, paragraphs 13 and 14, Report of the Secretary of War, Sixty-fifth Congress, first session:

The width of the channel opposite the city water front is not sufficient for the safe maneuvering of large vessels. When a vessel is lying at the face of the Mallory Wharf, the available space for large vessels to pass is inconveniently narrow, particularly when the tide is running strong. So long as the commerce of the port was small, and was handled in small vessels, this condition caused no serious complaint; but with the increase in size of ships and in the volume of the freight movement, the difficulties of navigation here have steadily increased. Vessels frequently ground on the submerged bank, with loss of time and sometimes more or less serious damage and expense for tug hire and lighterage.

Forwarding agents claim that they have frequently been forced to decline proffered charters, because the vessel offered could not reach the wharves with safety; and that large vessels that might touch at Key West with freight or to fill bunkers, avoid the port on account of the lack of adequate channel room. Recently the Mallory Steamship Line put a fine new steamer, the *Henry R. Mallory*, on the Texas run. This steamer is 439 feet long, and draws 23 feet, and is the first of several new boats of about this size, which are to be put in this service soon. On November 7, on her first voyage, touching at Key West, she grounded heavily on the shoal opposite the wharves, and in consequence of this mishap, the owners have decided not to send her to that port again while present conditions continue. * * * Key West is an important port for deep sea export and import. Located at the entrance to the Gulf of Mexico, this

port is a natural port of call for vessels in the Gulf trade, and occupies an exceptionally favorable location for a large bunker business in both coal and oil. Key West is the continental United States port nearest Cuba, and with the completion of the Florida East Coast Railway to Key West and the establishment of a daily railway car ferry service to Habana, the tonnage and value of imports and exports through the port in the Cuban trade have greatly increased. It appears to be established that the inner harbor, especially in its most used and most congested portion, is inadequate in size for the proper and safe conduct of its present maritime business, and that its inadequacy limits the natural expansion of that business. I am of the opinion that some improvement by the United States is justified.

And as is further shown by copy of letter written by Mr. C. D. Mallory, vice president of the Mallory Steamship Company, as follows:

JANUARY 15, 1916.

HON. W. J. SEARS,

House of Representatives, Washington, D. C.

DEAR SIR: In May, 1913, I addressed the War Department with reference to dredging the "middle ground" at Key West, Fla., opposite the Mallory Steamship Co. pier, urging that this work be done in order to permit of the operation to that port of the larger vessels owned and contracted for by this company, and stating that unless this work was done it would be too dangerous for the larger size vessels to be handled at our Key West Dock and we would be compelled to withdraw the passenger service of the New York-Key West-Galveston Line. I received a reply to this communication from Mr. E. N. Johnson, captain, Corps of Engineers, in which he states that Congress, in the river and harbor act of July 25, 1912, having adopted the project for improving Key West Harbor, printed in House Document No. 606, Sixty-second Congress, second session, which does not contemplate the desired work, the War Department is without authority to comply with our request, and he further states that authority therefor must be secured from Congress, and that his department is prohibited by the following provision of the river and harbor act of March 4, 1913, from again presenting the subject to that body without specific call therefor:

"Provided further, That after the regular or formal reports made as required by law on any examination, survey, project, or work under way or proposed are submitted, no supplemental or additional report or estimate shall be made unless ordered by a concurrent resolution of Congress."

It is my understanding that this matter is again being agitated and as the matter is of great importance to this company, I am taking the liberty of addressing you this letter, with the suggestion that the subject be presented before Congress, as we now have under construction a new vessel for this service which will be approximately 440 feet long, equipped with a single screw, and it will be practically impossible for her to navigate the waters opposite the Mallory Steamship Co. pier at Key West. This vessel will be the finest coast-wise ship in existence, and unless she can call at Key West it will deprive this company of securing the passenger and freight traffic of Key West and the Florida East Coast, and also be a decided disadvantage to Key West, as in order to make our service uniform none of the Galveston passenger ships will be able to call at that port.

Trusting you will be able to help us, I am,

Yours, very truly,

C. D. MALLORY,
Vice President.

At this time, in order to show the committee that the report of Lieut. Col. W. B. Ladue is well founded, and also to impress upon the members of the committee the importance of making the suggested improvement at the earliest possible moment, I desire to call your attention to the report of the Chief of Engineers. United States Army, 1917, part 1, page 729, last paragraph before statistics:

An additional car ferry steamer was added to the line operated by the Florida East Coast Railway and the Peninsular & Occidental Steamship Co., and a

new and larger steamship was added to the service of the Mallory Steamship Line. The new Mallory steamship was taken from the run because of lack of width of channel in front of the wharves.

There is no doubt but what the harbor at Key West is entirely too small and inadequate to take care of the commerce. Some time ago, I was informed over 300 loaded freight cars were at Key West waiting for boat transportation. In view of the shortage of cars this should undoubtedly prove to the members of the committee the importance of this work.

The CHAIRMAN. It is very important.

Mr. GRAY. It is a coaling station?

Mr. SEARS. Yes. They have a naval base for submarine destroyers and torpedo boats which are stationed there all the time.

The CHAIRMAN. It is also a coast artillery base?

Mr. SEARS. It is also a coast artillery base of the Government, and, of course, they generally get coal by rail, but they get some by boats coming in. It is very material that you also get these supplies to them.

Mr. BOOHER. What appropriation do you ask for?

Mr. SEARS. The department is asking for \$150,000, with a contingent clause that if an accepted contract can be secured to complete the work, \$237,000 and something, that they be given that right.

Mr. BOOHER. Will \$237,000 do that work?

Mr. FREAR. That will give a channel and turning basin 800 feet wide.

Mr. BOOHER. That will do the work you are asking for?

Mr. SEARS. That will do the work we are asking for. The idea of that, Mr. Booher—and I believe you will agree with the department—is this: When you appropriate by piece meal and bind them down to \$150,000, and they can not get a satisfactory contract, it will cost more to readvertise than it would if they had given the entire contract in the first place. We found that condition at Miami, and they saved money by having a similar clause inserted.

Mr. KENNEDY. They make that claim everywhere.

Mr. SEARS. That is entirely up to the committee—\$150,000 is what they ask for to begin the work.

Mr. FREAR. That is to increase a depth of 17 feet?

Mr. SEARS. No; to make it a depth of 26 feet all the way across, from 500 to 800 feet.

Mr. FREAR. What is the present depth, 17 feet?

Mr. SEARS. Of course, it gets shallower and shallower, Mr. Frear.

Mr. FREAR. Colonel, can you give us the present depth of Key West Harbor?

Mr. SEARS. Twenty-six feet at low tide.

Col. NEWCOMER. Thirty feet into the harbor.

Mr. SEARS. Right in front of the Mallory Docks.

Col. NEWCOMER. I think they have 30 feet into the main harbor. They do not have that much through the northwest passage; that is about 17 or 18 feet.

Mr. KENNEDY. What do you mean by the "northwest channel?"

Col. NEWCOMER. The channel coming in to Key West from the northwest avoiding the passage around the Dry Tortugas.

Mr. KENNEDY. Is that the channel going to Cuba?

Col. NEWCOMER. Oh, no; the channel to Cuba going south is 30 feet.

Mr. KENNEDY. Then the channel across to Cuba is of sufficient depth at the present time?

Col. NEWCOMER. Oh, yes; it is only the widening out that is estimated for and recommended.

Mr. DEMPSEY. How does the commerce at Buffalo and Key West compare?

Col. NEWCOMER. The commerce of Buffalo is very much heavier. At Key West the boats enter slips and have to back out from those slips into the channel. That requires a turning space, which is greater than the length of the boat, in order to provide some freedom of movement. That situation does not obtain at Buffalo. They there back out into the outer harbor, where there is plenty of space to maneuver.

Mr. FREAR. What is the usual practice with the average harbor in that respect—do the boats have to back out and, if so, for what distance?

Col. NEWCOMER. Usually they turn in the harbor. As a matter of fact they do turn in this harbor but they get into difficulties at times.

Mr. FREAR. A large boat of 400 feet length would have difficulty?

Col. NEWCOMER. Very likely it would.

Mr. FREAR. There is no turning basin?

Col. NEWCOMER. Nothing except the natural width of the channel.

Mr. FREAR. What is the practice, usually, to back out?

Col. NEWCOMER. Our harbors ordinarily have sufficient turning space in them. There are a few where it is necessary to back out before they can turn.

Mr. FREAR. How far do they back out, for instance, in a case of this kind?

Col. NEWCOMER. In this particular case they simply back out of the slip into this space, where they do turn under more or less difficulty.

Mr. FREAR. How far would that be?

Col. NEWCOMER. Simply the length of the boat.

Mr. FREAR. And then be able to turn?

Col. NEWCOMER. I say they have to turn in too restricted a space to turn safely. Coming out from the slip, which is normal to the 400-foot channel, they have to turn into the 400-foot channel somehow. As a matter of fact, I suppose they warp the boat around the end of the pier.

Mr. FREAR. Is that practicable without turning basin?

Col. NEWCOMER. It is practicable if you have sufficient space. Here the space is considered inadequate for safe turning.

Mr. FREAR. How could that be remedied without turning space?

Col. NEWCOMER. By simply cutting away the bank opposite the piers, to give the additional width that is needed.

Mr. SEARS. In addition to the above statement, I especially desire to call the attention of the committee to the fact that, notwithstanding the marvelous increase in tonnage and value of commerce at Key West, Congress has failed to appreciate the importance of said port

and no appropriation has been made since March 4, 1913, as is shown on page 2400, Report of the Chief of Engineers, United States Army, 1917, part 2. At the time I first appeared before the committee I did not have this report before me, and therefore could not give the tonnage and value. I, therefore, now desire to call your attention to page 2401, Report of the Chief of Engineers, United States Army, 1917, part 2, on which you will find the tonnage for the year 1917 to be 1,028,374 tons, or 899,249 more tons than in 1909, and 81,638 more tons than in 1915. The value of the 1917 tonnage is more than double that of 1909, and more than \$10,000,000 than in 1915. I also fail to find any water included in the above tonnage. This should have been included and would certainly increase both the tonnage and value for 1917.

I also again desire to call your attention to the last paragraph on page 729, Report of the Chief of Engineers, United States Army, 1917, part 1, in which it is stated "The new Mallory steamship was taken from the run because of lack of width of channel in front of the wharves."

I sincerely trust and believe I have impressed upon you the importance of this improvement. I also trust and believe the members of the committee and my colleagues in Congress will carefully study the report, to which I have above referred, and that as a war measure this will be included in the rivers and harbors bill which will be passed this year.

14

LOS ANGELES AND LONG BEACH HARBORS, CAL.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF LOS ANGELES AND LONG BEACH HARBORS, CAL.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
HOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMBERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 22 AND 23, AND
FEBRUARY 5, 1918.



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

LOS ANGELES AND LONG BEACH HARBORS, CAL.

COMMITTEE ON RIVERS AND HARBORS, HOUSE OF REPRESENTATIVES,

Tuesday, January 22 and 23, 1918.

The committee reassembled, pursuant to recess, at 2.30 o'clock p. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will please come to order. Senator, we will be very glad to hear from you at any time. We were not sure as to what specific improvement you desired to be heard upon.

STATEMENT OF HON. JAMES D. PHELAN, A UNITED STATES SENATOR FROM THE STATE OF CALIFORNIA.

Senator PHELAN. My information concerning the general question comes through my personal visit to the harbor of Los Angeles on one or two recent occasions, and I met the gentlemen who are most interested. I live, as you are aware, 450 miles north, in San Francisco. Capt. Osborne is very familiar with it all, and I came over here because I think it is a matter on which you should be informed—an important matter.

I have here a long telegram from the Chamber of Commerce, by C. S. Vandewater, president, and the city of Long Beach, by W. T. Lisenby, mayor. I do not know what the committee has been told. I will read it, as being the most expeditious way to get it before you.

(The telegram referred to is as follows:)

LONG BEACH, CAL., *January 17, 1918.*

Senator JAMES D. PHELAN,
Washington, D. C.:

It is vital to both Los Angeles and Long Beach that \$130,350 recommended by Board of Army Engineers in House Document No. 460, Sixty-fourth Congress, first session, page 2, be included in present rivers and harbors bill for the dredging of that portion of connecting channel lying within city limits of Los Angeles, Los Angeles County Flood Control Board bonds for \$4,450,000 have been voted and approved by Supreme Court of California. One million one hundred and seventy-three thousand dollars of this amount has been set aside for purchase of right of way and harbor protection. United States Engineers for Rivers and Harbors have recommended \$1,080,000 be appropriated for harbor protection, \$500,000 of which has been appropriated and made available. Legislature of California has recommended expenditure of \$1,080,000 for harbor protection, to be expended in conjunction with Federal appropriation. Two hundred and fifty thousand of this has been appropriated and is available. City of Long Beach has voted bonds for \$300,000 for harbor improvements, which includes \$187,000 for dredging that portion of connecting channel within city limits of Long Beach referred to in House Document No. 460.

This money is available, and Long Beach is anxious to begin dredging connecting channel, but can not begin until Government provides for completion of west end of connecting channel. Had conference to-day with Salt Lake Railroad officials, and they assure us all necessary steps have been taken to deliver deed to additional 200 feet referred to in House Document No. 460 when required by Government. Los Angeles city council has passed resolution agreeing to maintain that portion of connecting channel lying within its limits until completion of harbor protecting works. Long Beach city commissioners have passed resolution agreement to maintain that portion of connecting channel lying within its limits until completion of harbor protection works. This fully complies with all conditions stipulated by Board of Government Engineers in House Document No. 460. On account of large number steel vessels being constructed for Emergency Fleet Corporation at both Los Angeles and Long Beach Harbors, and on account of only dry dock south of San Francisco being located at Long Beach Harbor, very urgent from standpoint of military necessity that this work be started at earliest possible moment and prosecuted diligently to completion. If hearing before committee is advisable, please arrange date for same, and we will furnish such data and assistance as you require. Keep us fully advised by telegraph regarding development. We earnestly request your cooperation and assistance.

CHAMBER OF COMMERCE,
By C. S. VANDEWATER, *President*.
CITY OF LONG BEACH,
By W. T. LISENBY, *Mayor*.

The CHAIRMAN. That is from whom?

Senator PHELAN. That is from the Chamber of Commerce and the mayor of the City of Long Beach, which adjoins the harbor of Los Angeles, otherwise San Pedro.

I was there only last October, and I saw the phenomenal strides that were being made in shipbuilding. The Los Angeles Shipbuilding & Drydock Co. received a contract June 15, 1917, to build eight steel ships of 8,300 tons capacity, to cost \$10,000,000. At that time there was no shipbuilding yard at Los Angeles harbor. They have since that time—June 15, 1917—constructed their works, shipbuilding plant, and their ways, their blacksmith shops, everything complete, and have the four steel vessels on the ways, and they launched one of them on December 15. They immediately received another contract, of \$15,000,000, from the Shipping Board, on the showing that they had made. They had constructed a plant there in six months and launched one ship—the others being near completion.

The CHAIRMAN. Where is the shipbuilding plant located with reference to Los Angeles harbor?

Senator PHELAN. At Los Angeles harbor.

The CHAIRMAN. They are adjoining?

Senator PHELAN. Yes.

Mr. OSBORNE. One opens out into the other.

Senator PHELAN. This particular plant is in San Pedro, or what they now call the harbor of Los Angeles. I went over there and visited the harbor of Long Beach, where they are constructing submarines, and they were making successful trial trips at that time—there were three submarines. The development there has been extraordinary, accentuating everything that has been said in the House document referred to. In other words, their case is very much stronger now—this telegram is dated January 17, 1918—than when the work was recommended.

On page 3, at the end, it is stated that it is deemed advisable for the United States to cooperate—this is from Maj. Kingman, Chief

of Engineers—with the local authorities in constructing a channel 200 feet wide and 20 feet deep at mean lower low water connecting Long Beach Harbor with Los Angeles Harbor at a total estimated cost of \$317,900, of which the United States shall undertake only that part of the improvement which lies in Los Angeles Harbor, at an estimated cost of \$180,350, provided that the local interests deed to the United States, free of cost, an additional strip of land 200 feet wide alongside the present right of way and agree to construct and maintain that part of the channel lying within the limits of the city of Long Beach, and provided further that work shall not be commenced by the United States on its part of the channel until the necessary steps have been taken to protect it from flood deposits of silt, or until local interests have agreed to maintain this part pending the completion of protecting works. The total amount to be expended by the United States, \$180,350, should be provided for in one appropriation.

It seems that all these terms have been complied with and a great deal of money appropriated out of the local treasury, considering the resources of the country there, and it is an earnest of the good faith of the people. The work is made necessary by the needs of the harbor serving a very important part of the United States. This work of protecting the harbor against silt is well in hand. Appropriations have been made by Los Angeles County and by the Federal Government to that end, and \$500,000 Federal money is available to the city, I believe.

Mr. OSBORNE. It is \$1,080,000.

Senator PHELAN. Yes. This gigantic work is going on there in connection with these shipping interests. It is very important work. As you have seen by the newspapers, the Chinese have fired upon the gunboat *Monocacy* on the Yangtze River. While the details of this are not yet known, the incident shows, when taken in connection with other facts, that we are open to danger. The Japanese are occupying Vladivostok. We are exposed absolutely on that coast. That is an additional reason for encouraging shipbuilding there. If we turn out ships there, we will be in a position to meet the enemy. You can not send a fleet from the Atlantic to the Pacific in case of war, because the canal would be the first thing destroyed by the wily enemy. I have fear of the oriental people. So anything in the nature of shipbuilding on the Pacific coast, for that reason and other reasons, should be encouraged.

These people are spending their money. What they are asking from the Federal Government is small, compared to the demands of the Pacific. San Francisco is doing splendidly. We have there a deep harbor. I don't think we have cost the Government \$100,000 in and around the city of San Francisco proper in 50 years, because it is a natural harbor. These people down here have made their harbor. They have the only dry dock on the Pacific coast south of San Francisco and north of Panama. It is an approved scheme of making this harbor safe. It is to construct this channel in here [indicating on map].

The CHAIRMAN. Where is Long Beach on that?

Senator PHELAN. The harbor of Los Angeles is here [indicating], and it is to make that channel there [indicating]. This is being taken

care of by Long Beach, and this is to be taken care of by the Federal Government [indicating] and by Los Angeles. Is that right?

Mr. OSBORNE. That is right.

It is 200 feet in width by 20 feet in depth—a channel 200 feet with a depth of 20 feet. How long is it?

Mr. OSBORNE. Over 5,000 feet. It runs up to that point there [indicating on map].

Senator PHELAN. All the Government is asked to do is to take care of 2,000 feet, or about that. Long Beach takes care of this [indicating].

Mr. DUPRÉ. May I inquire where the steel comes from with which these ships are being built? Does it come from San Francisco or Los Angeles, or is it shipped in from the East?

Senator PHELAN. They get it from the Steel Corporation under priority orders.

Mr. DUPRÉ. From what section of the country does it come?

Senator PHELAN. I think it comes from Bethlehem. I am not sure.

Mr. DUPRÉ. Are parts of the ship fabricated at Bethlehem and then sent to the shipbuilders out there?

Senator PHELAN. They send their plates out there, and they are fabricated there. I was in the drawing room of this particular concern, and they had four ships on the ways, and they had in there a full-sized pattern of the plates that go on the sides of the ship, and they took it down to the boiler makers, who cut them all at one time, punch the holes, and put them on the side of the vessel. These sheets are cut to fit the design at the works.

Mr. DUPRÉ. Possibly, Senator, my question was a bit misleading. It would be interesting to me to know, and perhaps also to the other members of the committee, how these ships are made. Now, take these plates. Do they have them designed and patterned in Bethlehem and then have them sent out there to be put together? What is the *modus operandi*?

Senator PHELAN. My impression is that the boiler-plate sides are cut out there. They receive great plates and cut them there according to patterns of their own make. The designs are supplied to them and they are cut out of the raw material, which is steel plates right there on the ground. The ribs, I think, come out already fashioned.

Mr. DUPRÉ. Yes.

Senator PHELAN. They get high efficiency on account of being able to work the year around, and there is a tremendous demand by workmen to get employment there on account of the climatic conditions.

Mr. SWITZER. What is the population of Long Beach?

Senator PHELAN. Sixty thousand. It was simply a small resort a few years ago, but now it is a thriving city of industries. The other harbor there—the Los Angeles Harbor—is doing a lot of construction. I saw also the construction of submarines there. It rather surprised me.

The CHAIRMAN. I was going to ask you a while ago any reasons that occurred to you why the adoption of this project may be considered urgent. Is it so urgent that it should be adopted in this bill? And if so, why is it urgent? Do any facts occur to you which make it necessary, in your opinion, to adopt this project now rather than wait?

Senator PHELAN. So far as I am advised, it is my impression, from what I saw and heard there and from what I have read here, that this is an integral part of the harbor improvement. There is no use in doing one thing unless they do the other. They are doing work in saving the harbor from damage and deterioration, and that work should be carried on. It is necessary to do this work as a part of the harbor development. If it is delayed it will hold everything else back. That is the impression I get.

The CHAIRMAN. To what extent will the delay injuriously affect the ship construction?

Senator PHELAN. As I understand the situation, there is a little danger there of the filling of the basin into which they launch their ships. This is to relieve the whole situation and to put it upon a working basis. Otherwise, it will involve expense on somebody's part—probably pretty expensive dredging. This work will save a drain on the Federal Treasury. I think they dredge regularly in San Francisco Bay, up at the northern end, in the neighborhood of Mare Island Navy Yard. It is exceedingly expensive. I think it would be wise economy to do the work thoroughly, especially at this time, because of the shipbuilding that is going on there now. They have \$25,000,000 in contract there at the present time.

Mr. GALLAGHER. Which yard does that apply to?

Senator PHELAN. The Los Angeles Shipbuilding & Dry Dock Co. at San Pedro.

Mr. OSBORNE. That is in the west basin.

Mr. GALLAGHER. Yes; that is in the west basin. I have it here on this map.

Senator PHELAN. Mr. Naphthely is at the head of the company, and Mr. Gardner, from the Union Iron Works, of San Francisco, a man of great experience, is doing the actual work there, and I think he is responsible for creating this thing in such a short time. It is rather extraordinary. It is natural that the Government, since it is seeking shipbuilders and encouraging them in other ways, to do its part in keeping their harbor in shape for the launching of the ships.

Mr. DUPRÉ. Do you think Mr. Denman would favor this proposition?

Senator PHELAN. I am sure he would. He is testifying to-day before the Senate committee.

Mr. DUPRÉ. I happen to know that. That is the reason I had him in mind.

Senator PHELAN. They are building some ships at Santa Monica, hard by, and we are building concrete ships in San Francisco Bay. Concrete shipbuilding is a new industry.

Mr. FREAR. I don't get this clearly in mind. This is a connecting channel from Long Beach Harbor to Los Angeles Harbor?

Senator PHELAN. Yes.

Mr. FREAR. These improvements in shipbuilding are over in Long Beach Harbor?

Senator PHELAN. The ones I am speaking of are Los Angeles Harbor and Long Beach Harbor. You are right so far as saying that they are building at Long Beach. The steel ships are building at Los Angeles. Isn't that right, Colonel?

Mr. OSBORNE. They are building at Long Beach and in Los Angeles Harbor also.

Senator PHELAN. Where is the Los Angeles Shipbuilding & Dry Dock Co.?

Mr. OSBORNE. In the west basin.

Senator PHELAN. In the west basin. That is in San Pedro, a part of Los Angeles. And the submarines are being built in Long Beach?

Mr. OSBORNE. Yes.

Mr. FREAR. What is the purpose of this channel we have here between Long Beach and Los Angeles? There is a channel direct into San Pedro Bay from Long Beach Harbor, isn't there? Is that a fact? Where do they take their vessels in now?

Senator PHELAN. It is an open harbor there.

Mr. FREAR. San Pedro Bay?

Senator PHELAN. Yes. And what protects it against the northwest gales is that breakwater.

Mr. FREAR. Now, is there sufficient depth out there to take the boats from the ways?

Senator PHELAN. In the basin there is just about enough water to carry them out.

Mr. FREAR. What is the immediate necessity for this channel between Long Beach Harbor and Los Angeles Harbor? I don't get that clear.

Senator PHELAN. Can you explain that, Colonel? There is a report on that.

Mr. OSBORNE. I have the reports here.

Mr. GALLAGHER. What is the question?

Senator PHELAN. The necessity for that channel in launching these vessels.

Mr. GALLAGHER. That channel is an inside channel, and I suppose it is protected against the waves outside. It is an inside channel from Long Beach Harbor to Los Angeles Harbor. They could move up and down that channel there without—they have a turning basin in there, too.

Mr. SWITZER. This work ought to be done sometime.

Senator PHELAN. It must be done sometime, and it ought to be done in order that the work can be done with economy, as I understand it. If they had thought that the work on this channel was not going to be done, they might not have done some of the work down there.

I see here, on page 6, that Capt. McKinstry, now a major general in France, made a report. He had two propositions, and he favored this one. Early in 1914 the City of Long Beach voted bonds to the amount of \$625,000 for harbor improvement, of which \$500,000 was intended for use in cooperation with the Government in improving the sea entrance. It is understood that a portion of the money could not be made available for cooperation with the United States in improving the connecting channel instead of the sea entrance channel, if such a course should be preferred and approved by the Government. Thus could the cost, estimated at \$488,000 in Col. McKinstry's recommendation, of a connecting channel 200 feet wide and 24 feet deep be now divided between the Government and the city of Long Beach.

Now, as to that connecting channel, one of the reasons for that is to avoid the cost of a sea entrance to Long Beach. They get in under the protection of Los Angeles Harbor and go over to Long Beach.

Mr. GALLAGHER. It is an inside basin there.

Senator PHELAN. It is an inside basin.

Mr. GALLAGHER. And the old Los Angeles River is in there, and they are going through that river up to Long Beach. They are deeping that channel. That does away with the outside entrance at Long Beach.

Mr. FREAR. Will they abandon the outside entrance, or will they continue to dredge that also?

Mr. GALLAGHER. I don't know.

The CHAIRMAN. You mean at Los Angeles?

Mr. FREAR. No. At Long Beach.

The CHAIRMAN. The last report, to which the Senator has been referring, recommends no further improvement of Long Beach Harbor at the present time.

Mr. FREAR. That is by the engineers?

The CHAIRMAN. Yes. The project is to connect these two channels—Long Beach and Los Angeles. We adopted in the last bill somewhat of an ambitious project for Los Angeles Harbor.

Mr. FREAR. Where is that? I was trying to place that in connection with this.

Senator PHELAN. That was to provide for the disposition of silt coming down from the mountains.

Mr. FREAR. Yes. The city has appropriated—or the county of Los Angeles—over \$4,000,000 for this project. Here is an interesting item on page 9, showing that in addition to the commercial value of the channel proposed to connect Long Beach Harbor and Los Angeles Harbor there is a military value, which deserves some consideration.

Mr. DUPRÉ. What is the date of that report, Senator?

Senator PHELAN. January 4, 1916.

Mr. DUPRÉ. Yes.

Mr. GALLAGHER. That refers to the inside channel, Senator.

Senator PHELAN. It is inside; yes.

Mr. GALLAGHER. That is of military advantage.

Mr. BOOHER. They are recommending the improvement of the inside channel to connect Long Beach and Los Angeles Harbors, instead of any outside harbor, or the improvement of the bay there.

Senator PHELAN. It has been very closely studied by the engineers, and their recommendation is, I suppose, our best warrant for approving that. Certainly, I should not set up my own judgment against theirs.

Mr. GALLAGHER. It is the inside channel they are protecting.

Mr. FREAR. What I am asking is this: The Long Beach people are paying their part of the expense of improving this channel, but when it comes to the Los Angeles part the Government is asked to contribute. Why aren't the people doing it entirely?

Mr. OSBORNE. The people are doing it entirely.

Mr. FREAR. How is that?

Mr. OSBORNE. They are putting in \$300,000.

Mr. FREAR. That is, the Long Beach people. How much extra will it take?

Mr. OSBORNE. It will take \$130,350 to connect up with that.

Mr. FREAR. What is the reason that the Government is asked to pay for the Los Angeles portion and not for the Long Beach?

Mr. OSBORNE. Because Los Angeles is paying for everything else—for a lot of stuff that it ought not to pay for.

Mr. FREAR. But the Government is contributing.

Mr. OSBORNE. Not a nickel. In 46 years we have given about \$5,000,000, and Los Angeles has contributed \$6,000,000 in the last 10 years.

Mr. FREAR. We have given Los Angeles \$5,000,000.

Senator PHELAN. That is for completing the breakwater.

Mr. FREAR. I am trying to get a reason for having the Government pay for Los Angeles and not for Long Beach. Why should the Government do it in one case and not in the other? I am trying to find a reason for that. You have the channel completed part way?

Senator PHELAN. Yes.

Mr. FREAR. They start in on this work and do part of it, and at one point the Government is asked to step in and complete one part, the connecting part. Why is Long Beach required to complete its part alone? And why is the Government asked to step in and complete the work for Los Angeles?

Mr. OSBORNE. Perhaps I can explain it. Los Angeles does not especially need this. It is not particularly for Los Angeles, but more directly for the benefit of Long Beach.

Mr. GALLAGHER. It connects up the two?

Mr. OSBORNE. Yes.

Senator PHELAN. It says here that it is deemed advisable to connect Long Beach Harbor with Los Angeles Harbor, at a total estimated cost of \$317,900, of which the United States shall undertake only that part of the improvement which lies in Los Angeles Harbor, at an estimated cost of \$130,350. That is the recommendation of the engineer, that the United States was to undertake that part of the improvement which lies in Los Angeles Harbor. Why did the engineers require that it be done by the Government in Los Angeles Harbor?

I suppose that is because the other work was done by the municipality, at its expense, and this sort of balances it. I suppose that is it. This work is agreeable to the representatives of both Los Angeles and Long Beach.

Mr. OSBORNE. It is done especially for Long Beach, and not for Los Angeles.

Senator PHELAN. It gives Long Beach an entrance from the sea without improving their own entrance. It would be a very expensive matter to construct breakwaters. It is largely for the benefit of Long Beach Harbor.

Mr. OSBORNE. Very largely.

Senator PHELAN. Yes.

The CHAIRMAN. You are both right that this is for the benefit of Long Beach, although it is provided that the work done by the Government shall be that part which lies in Los Angeles Harbor.

Mr. OSBORNE. You will notice by the plan there that it runs from the Los Angeles limits. That is the division between Los Angeles and Long Beach. There is only a small part of it in Los Angeles.

The CHAIRMAN. The amount of local cooperation imposed and the benefit to Long Beach seem to make it a meritorious project; but what I had in mind, and what I endeavored to express a while ago, is this: I would like to know any facts that would bring this project

in the class of other meritorious projects and make it very important to adopt it in this bill; that its to say, under war conditions.

Senator PHELAN. You see, there is extraordinary activity down there.

The CHAIRMAN. There is a necessity to restrict this bill to those projects which are acutely urgent.

Senator PHELAN. I heard down there that they were taking chances in building their yards without better protection, but they were willing to take the chance, knowing that this work would protect them in their enterprise. This makes it a very worthy matter for consideration. I think, on the part of the lawmaking body of the Government. They are in danger down there, and the situation is very unusual, in view of the fact that they have contracts for building \$25,000,000 worth of ships.

The CHAIRMAN. I can see the advantage of affording them passage from Los Angeles Harbor to Long Beach Harbor for the smaller class of merchant and war vessels there being constructed at Long Beach, but to what extent that necessity is urgent is a query which presents itself to my mind. Perhaps if this matter were presented to the Shipping Board, they might have some reason.

Senator PHELAN. I am sure it would be helpful to you to get a report from the Shipping Board, because they have their agents on the ground there watching the construction. It is carefully inspected. I personally was there; Congressman Sims was there; Congressman Adamson was there, and other Congressmen, I believe. They saw with their own eyes what was going on there. They should know something of what their needs are there. This telegram begins by saying that it is vital to both Los Angeles and Long Beach—

Mr. FREAR (interposing). I understood—they say it is vital to Los Angeles—I understand this was entirely for the benefit of Long Beach. Los Angeles makes no contribution to it.

Senator PHELAN. It says the improvement is for the purpose of connecting that portion of the channel lying within the city of Los Angeles, or Los Angeles Harbor. It doesn't say it is for the benefit of either.

Mr. FREAR. It is vital to Los Angeles?

Senator PHELAN. No.

Mr. FREAR. Pardon me.

Senator PHELAN. It is for dredging that portion of the connecting channel, which is the Long Beach-Los Angeles channel, lying within the city limits of Los Angeles. That is what the bill provides. That is the proposition which is up to you—to complete that portion of it that lies within Los Angeles Harbor.

Mr. FREAR. But what was the first part of the telegram? Pardon me for interrupting.

Senator PHELAN (reading). "It is vital to both Los Angeles and Long Beach."

Mr. FREAR. If it is vital to Los Angeles, I would like to inquire why it is entirely for the benefit of Long Beach?

Senator PHELAN. This is the telegram, agreeable to all interests.

Mr. FREAR. That is the same project, I take it, that originated in document 896, on page 3. I am wondering if I am right about that.

The CHAIRMAN. That was adopted in the last bill.

Mr. FREAR. That is, on April 11, 1914, wherein they say that they are unable to recommend the desired proportion of the United States in the development of Long Beach, either in deepening the entrance or dredging the interior channel to connect with the harbor of Los Angeles.

Senator PHELAN. That is news to me. This is an appropriation for connecting Long Beach Harbor and Los Angeles Harbor.

Mr. FREAR. This is the same thing. Thereafter there was a proposition for a contribution. Was that made?

Mr. OSBORNE. It was not the same project. You will see it is explained in House Document 460, on pages 2 and 3.

Mr. FREAR. I have House Document 460.

Mr. OSBORNE. That explains it. They still hold the same notion. It is not exactly the same project.

Senator PHELAN. It says on page 2, that the district officer finds no justification at this time (January, 1915) for the United States to undertake any improvement of the entrance to Long Beach Harbor, but he believes that under certain conditions it is advisable to provide a connecting channel between Long Beach and Los Angeles Harbors. That is what they are doing now—connecting these harbors.

Mr. FREAR. It is practically the same channel, as I take it, here from this report.

Mr. OSBORNE. It is not the same project.

Mr. FREAR. As it appears on the map, it is the same channel.

Mr. OSBORNE. Senator, there is one other reason connected with this, and that is that there is a dry dock—not a very large one, but there is a dry dock—in Long Beach Harbor, and there is none at any other point south of San Francisco.

Senator PHELAN. Do you know the dimensions of that dry dock?

Mr. OSBORNE. I don't remember, but it is very useful.

Senator PHELAN. And these people are there building these ships for the Government. The Shipping Board has been willing to grant them contracts amounting to \$25,000,000, and they have already launched one ship. If they are to carry on this shipbuilding work, it is necessary for them to have water into which these ships can be launched. I would say that these submarines draw very little during construction—not more than 5 feet. They seem to float right on the water. They tested one while I was there. Nobody was on it the first time it submerged. After it was tried out, a report was made indorsing it as a perfect ship.

Mr. BOOHER. Would the improvement of this harbor there tend to increase the facilities for building boats?

Senator PHELAN. That is one of their great objects. They are going into shipbuilding there. It is an industry which is a necessity.

Mr. BOOHER. I think perhaps we ought to call on the Shipping Board for a recommendation. What do you think? I am willing to take the Senator's word for it, so far as I am concerned.

Senator PHELAN. I don't see how you can make any mistake in encouraging work of that kind.

The CHAIRMAN. Senator, your statement has certainly amplified and supplemented the report of the engineers here upon this connecting channel between Long Beach Harbor and Los Angeles Harbor, and if it can be shown to the committee that there is such an

urgency as to differentiate this project from other new projects which will not be adopted in this bill, why—

Senator PHELAN (interposing). Will you be good enough to let me bring you some information on the question of urgency? I will see the Shipping Board myself and will also communicate with Long Beach and let them make their case upon that point—why it should be done now instead of next year. (See Appendix A.)

Mr. DUPRÉ. What are the reasons?

The CHAIRMAN. For economy in this bill?

Mr. DUPRÉ. Yes.

Mr. GRAY. I understood it last year, but I don't know whether we are always going to have it. When are we going to stop it?

Mr. DUPRÉ. We have not had any understanding as to why these things are so and so. We ought to have a statement from the chairman on that point. As a matter of fact, I have not understood the reasons at all. It seems to me that now is the time for the chairman—the members of the committee are loyal to him—to state what these reasons are.

Mr. FREAR. That would be a matter to take up in executive session.

Senator PHELAN. We will cooperate with you, whatever you do.

The CHAIRMAN. We will expect to hear from you when you have something further to say, Senator.

Senator PHELAN. Yes, sir.

(Whereupon the committee went into executive session.)

JANUARY 23, 1918.

REMARKS OF HON. CHARLES H. RANDALL, OF CALIFORNIA.

The CHAIRMAN. Mr. Randall desires to make a few remarks in regard to the new project for a channel connecting Long Beach Harbor, Cal., with Los Angeles Harbor, printed in House Document No. 160, Sixty-fourth Congress, first session.

Mr. RANDALL. This project, I think, has been before the committee recently, and I presented it two years ago, also. It is in regard to the connecting channel between Long Beach and Los Angeles Harbors.

The CHAIRMAN. What we would particularly like to hear, Mr. Randall, are the reasons which induce you to believe that this project is urgent.

Mr. RANDALL. I anticipated that that question would be asked, because all measures must now pass war muster. I want to devote a few minutes to that feature. Of course, the members of the committee are familiar with the fact that the Board of Engineers and the Chief of Engineers have recommended the construction of this channel, on condition that the citizens of Long Beach construct, out of their own funds, the portion which lies within the limits of Long Beach Harbor. And what I am here for, is to say that the city has provided the funds and is ready to go ahead with its part of the work. They have provided \$187,000, I believe, for that purpose, that being the amount estimated by the Board of Engineers and the Chief of Engineers. The amount that the Government is asked to

provide is \$130,350 for the construction of that portion of the channel which lies in the Los Angeles end of the harbor.

Now, as to the emergency features, I call your attention to the report of the division engineer, Maj. R. R. Raymond, made in 1915, in which he says:

In addition to the commercial value of the channel proposed to connect Long Beach Harbor and Los Angeles Harbor, there is a military value which deserves some consideration.

He says further:

* * * The ocean entrance at Long Beach Harbor may become worthy of improvement hereafter by the United States as an important entrance to Los Angeles Harbor, as well as to Long Beach Harbor.

There are, as you know, large shipbuilding plants at work there in Long Beach Harbor and in Los Angeles Harbor on ship contracts for the Shipping Board, and there have already been constructed in Long Beach Harbor five submarines for the Government and a vessel for the Lighthouse Bureau, a tender. Long Beach Harbor has the only dry dock south of San Francisco. Now, the importance of the connecting channel is from the use to be made by the Government, not only for the movement of commercial vessels, but for the use of submarines and naval vessels. The ocean entrance of either harbor, through the vicissitudes of war, might be closed, and in that case the connecting channel would be very important from a military or naval standpoint.

Mr. FEAR. How would an entrance be closed. By a foreign fleet?

Mr. RANDALL. The suggestion is that there is a possibility of its being closed. It might be by accident. It might occur by the sinking of a vessel by an alien enemy similar to the Halifax disaster. The entrance to either harbor is very narrow and the sinking of a large vessel in the ocean entrance of either harbor would absolutely close that harbor. But here you can have an absolute certainty of getting out at another ocean entrance by simply dredging a connecting link of 6,800 feet.

Mr. DUPRE. Is there a connecting channel there now?

Mr. RANDALL. There is a channel there which has been used for small boats. But I do not think it is navigable now for even small boats.

The city of Long Beach, in addition to providing its share for the construction of the connecting channel, has provided an additional fund of about \$250,000 for dredging its ocean entrance and harbor. They have sufficient water for launching and taking ships out of the shipbuilding plants at this time. Los Angeles, through its city council, has passed a resolution guaranteeing to maintain their portion of this channel at their own expense.

Mr. FREAR. How is it that the city of Los Angeles is not called upon to contribute toward the construction of this channel?

Mr. RANDALL. Why the city of Los Angeles has not contributed toward the construction of this channel I do not know, but they have already expended four or five millions of dollars on this harbor.

Mr. FREAR. It will be of benefit to Los Angeles, will it not?

Mr. RANDALL. It would benefit Los Angeles. I do not know why they were not called upon to contribute. I am talking for Long Beach. Los Angeles has been very liberal in the expenditure of

money for its harbor. They have indorsed this connecting channel and are willing to expend money to keep it in condition to be used. I presume that Long Beach is a little more anxious for this improvement, from the standpoint of benefits. Los Angeles has a very well developed channel to the ocean. Long Beach has a pretty good channel inside, but has not as good a channel leading to deep water in the ocean, and it is very natural that the Long Beach people are more anxious for this channel than Los Angeles is.

Mr. BOOHER. What is the nature of the land through which this channel is to be constructed?

Mr. RANDALL. It is swamp land and is merely a dredging proposition. At high water all that land is overflowed.

The channel is to be 200 feet wide and 20 feet deep, the right of way, 400 feet wide, for which is furnished the United States free of cost, and in addition local interests are to furnish an additional strip 200 feet wide for enlargement purposes; the city of Long Beach is to construct and maintain that part of the channel lying within its limits.

The CHAIRMAN. And how do you connect this channel connecting Los Angeles and Long Beach Harbors by this interior route with the shipbuilding industry at Long Beach. How are the two associated? How is this improvement associated with the shipbuilding industry?

Mr. RANDALL. Well, by reason of the advantage of two openings to the sea. If one shall be closed by any accident then the connecting channel would provide an outlet through the other entrance. The Los Angeles entrance is much the safer, and it is better protected than the other, having a breakwater. Long Beach has offered to pay all the expense of construction and maintenance in order to get this channel. The Government is just as much interested, or more, from a financial standpoint than the city of Long Beach, because the Government's vessels are building in Long Beach Harbor.

Mr. KENNEDY. What is the distance from Long Beach Harbor to the sea direct and the distance around through the Los Angeles channels?

Mr. RANDALL. The distance from Long Beach to Deep Water is about one-half mile, and around through Los Angeles Harbor I would say about $2\frac{1}{4}$ miles; it might be 3 miles.

Long Beach has complied with all the conditions required by the engineers. I think that is all, Mr. Chairman.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Tuesday, February 5, 1918.

The committee met this day, Hon. John H. Small (chairman), presiding.

(Preceding these statements hearings were held on Wills Strait and Tenants Harbor, Me., and on Ohio River at Cairo, Ill.)

The CHAIRMAN. Now, gentlemen, we have some gentlemen from Long Beach, Cal., who desire to be heard, and Capt. Osborne will kindly present the matter and also present the gentlemen to the committee.

Mr. OSBORNE. Mr. Chairman and gentlemen of the committee, we have here this morning a delegation from Long Beach, Cal., consisting of my colleague, Mr. Charles H. Randall, who represents the district alongside the one that I represent, and I think this work is partly in his district and partly in mine. Mr. Van de Water, the president of the Chamber of Commerce of Long Beach, will speak, and also Mr. Windham, former mayor of Long Beach, who is especially well informed as to the conditions there, especially with reference to this harbor which he has been very influential in building up. I want to call the attention of you gentlemen to the fact that these gentlemen have come 3,500 miles for the purpose of appearing before this committee, and it is in earnest of the deep interest and confidence that they have in the justice of what they are going to say to you.

I will first introduce to you Mr. Van de Water, president of the Chamber of Commerce of Long Beach.

**STATEMENT OF MR. C. F. VAN DE WATER, PRESIDENT OF THE
CHAMBER OF COMMERCE OF LONG BEACH, CAL.**

Mr. VAN DE WATER. Mr. Chairman and gentlemen of the committee, I have come, in addition to being a representative of the chamber of commerce, also on the request of the city government of Long Beach, and unofficially as the representative of other interests not only in Long Beach Harbor but Los Angeles Harbor. I will put your minds at rest on one point. I never made a speech and I will be very brief in the presentation of this matter. We have come because we believe that this matter is vital to the future of the entire harbor district. There are not two harbors. It is all one, and there is absolute unanimity in the request that we are presenting from all interests around the harbor. That is evident from the fact that Mayor Woodman, of Los Angeles, has made this statement: That the development of the Long Beach end of the harbor is essential to the development of the Los Angeles end of the harbor, from the fact that the municipality of Los Angeles has territory that is only subject to lease. There are many industries that will not locate on leased land and we have inside of the corporate limits of Long Beach a very large area that can be owned in fee by industrial enterprises. Mr. Gordon, harbor commissioner for Los Angeles, made this statement to Mr. Windham and myself a few days ago: It is vital for the immediate further development of the shipbuilding industry, which is a war-emergency measure, that this channel be constructed as quickly as possible.

I want to bring to your attention a new feature which has arisen since any of you have seen this harbor district. This is the area, shown in green [indicating on map]. That has been acquired by the municipality of Los Angeles under the tidelands decision. Mr. Gordon states that if this channel is put through this can be utilized for very extensive shipbuilding facilities on Government work. This harbor is especially important from the fact that it is the only harbor within 450 miles, south of San Francisco. We have very few harbors on the southern Pacific coast. The situation is quite different from that on the Atlantic coast.

I am a bearer of messages also from other bodies, which I am asked to present to you and which set forth the facts I wish to present in very much more concise and better language than I might use, and with your permission I will present them and that will constitute what I have to say about this matter. For information as to the physical features of the harbor I will defer to Mr. Windham.

We have first two communications which I want to read, which are in line with the provisions of House Document 460, first session Sixty-fourth Congress, setting forth the resolutions of the city of Los Angeles and the city of Long Beach, guaranteeing the maintenance of the Los Angeles and the Long Beach ends of the connecting channel, which I will leave with your secretary.

I have this communication from the board of supervisors of the county of Los Angeles, which I am asked to present to your committee, under date of January 28:

LOS ANGELES, CAL., January 28, 1918.

To the members of the congressional Committee on Rivers and Harbors, Washington, D. C.

GENTLEMEN: The board of supervisors of Los Angeles County, Cal., to-day gave unanimous approval to the following resolutions, respectfully submitted for consideration by your honorable body:

Whereas all necessary provisions of a local nature have been made for the construction of a connecting channel between the harbors of Los Angeles and Long Beach; and

Whereas completion of this vitally essential project now only awaits an appropriation by Congress of \$130,350; and

Whereas it is generally understood that recommendations for appropriations for new projects by your honorable body during the present session of Congress will be confined exclusively to such undertakings as may have direct connection with a successful prosecution of the great conflict in which the Nation is now engaged: Therefore be it

Resolved, That the board of supervisors of Los Angeles County, in petitioning the Rivers and Harbors Committee for a favorable report on an appropriation of \$130,350 to assist in the construction of said connecting channel between the harbors of Los Angeles and Long Beach, ignore entirely the great local interests involved, and call attention solely to such phases of the project as will bring it well within the exceptions provided for by your action.

The imperative need by the Government of merchant shipping is universally recognized as one of the greatest of the war. There are now being constructed—and under contract—in Los Angeles Harbor approximately 150,000 tons of such shipping, and in Long Beach Harbor 25,000 tons, aggregating in cost about \$30,000,000, with a number of other contracts with the Government probable within the next few months.

There are now on the ways in Long Beach Harbor three modern submarines being constructed for the Government at an average cost of about \$650,000 each. In the same harbor is found the only dry dock between San Diego and San Francisco, with a capacity of 3,000 tons.

On the 2 harbors there are located 7 shipbuilding plants, employing at present about 6,000 men. This number will be materially increased within the next 60 days.

In the same location are 20 fish canneries, many of which have Government contracts; a woolen mill which is now filling an order for 1,000,000 Army overcoats; 3 potash factories, producing a chemical used in the manufacture of explosives; and 7 lumber mills and yards, supplying timber for ships, etc.

There are over 3,000 men and women employed in the fish canneries in San Pedro and Long Beach, a majority of whom live in the latter city. Construction of a connecting channel would overcome present great difficulties in the way of transportation of employees, thus facilitating work on Government contracts.

The possibility of blocking the mouths of one or both harbors by "our enemies within" is grave, and the injury to the Nation which would follow such disaster

might involve a cost to the country tenfold greater than the relatively small sum provided in the appropriation sought.

A connecting channel would provide two ocean entrances and exits for both harbors, reducing the danger suggested to the minimum.

It might be stated in this memorial that favorable action by your body on our petition would involve no danger to the proposed work from future floods, because the flood-control project has already been fully approved by the Nation, county, State, and city, and adequate moneys provided for the work, so that full protection will be given the proposed channel before that work can be completed. In the meantime the cities of Los Angeles and Long Beach have passed resolutions guaranteeing to keep the channel open if the Government makes appropriation.

Very truly, yours,

Board of Supervisors, Los Angeles County, Cal.

This morning we had this telegram addressed to you gentlemen from the Los Angeles Shipbuilding & Dry Dock Co., which has a contract for eighteen 8,800-ton steel vessels:

SAN PEDRO, CAL., January 31, 1918.

C. H. WINDHAM

(Care Congress Hotel, Washington, D. C.).

Committee on Rivers and Harbors.

House of Representatives, Washington, D. C.

GENTLEMEN: We understand that there is a request before your honorable committee to arrange for an appropriation to connect the turning basin of the Long Beach Harbor with the turning basin at Los Angeles by the digging of a 12,000-foot canal. We would suggest that the digging of this canal would materially aid the general shipbuilding program, which is at present going on in this vicinity and is in line with the development of the west basin and the building of the dry dock, the construction of which is under consideration by the Emergency Fleet Corporation.

Yours, very truly,

LOS ANGELES SHIPBUILDING & DRY DOCK CO.,
By SAM L. NAPHTALY,

Vice President and General Manager.

Mr. VAN DE WATER. I might close my remarks by the presentation of these two letters to Senator Phelan, which I think will give additional information as to the emergency nature of this project, under date of January 24, 1918, from the United States Shipping Board Emergency Fleet Corporation:

UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION.

Washington, January 24, 1918.

HON. JAMES D. PHELAN,

United States Senate.

DEAR SENATOR PHELAN: Your letter of the 23d instant, addressed to Chairman E. N. Hurley, relative to the desire of the Rivers and Harbors Committee of the House of Representatives for an expression of opinion as to the importance of the item of \$130,000, which is under consideration for the improvement of Los Angeles Harbor, to the general construction program of the Emergency Fleet Corporation, has been referred to me for reply.

I beg to advise that we have contracts as follows with shipbuilding plants in Los Angeles Harbor:

Los Angeles Shipbuilding & Dry Dock Co., San Pedro, 18 steel vessels.

Fulton Shipbuilding Co., Wilmington, 4 wood hulls.

Ralph J. Chandler Co., Wilmington, 4 wood vessels.

The total dead-weight carrying capacity of these vessels will be nearly 200,000 tons, and the total cost over \$30,000,000, including the California Shipbuilding Co. contract.

The shipbuilding facilities of Los Angeles Harbor are rapidly growing, and anything that will be of general benefit to the harbor, such as the proposed new channel, will tend to promote the shipbuilding industry.

Not far distant, at Long Beach, there is the California Shipbuilding Co., which, in addition to contracts with the Navy Department, has a contract for three steel vessels with the Emergency Fleet Corporation.

In general, I am pleased to state that work on all the contracts with the Emergency Fleet Corporation, in Los Angeles and vicinity, is being carried on with great energy, and is deserving of every encouragement.

Very truly, yours,

CHARLES PIEZ,
Vice President and General Manager.

The CHAIRMAN. He is vice president and general manager of what? Mr. VAN DE WATER. United States Shipping Board, Emergency Fleet Corporation.

And the following letter under date of January 30 from Josephus Daniels, Secretary of the Navy, addressed to Senator Phelan.

NAVY DEPARTMENT,
Washington, January 30, 1918.

My DEAR SENATOR: Yours of January 23, 1918, in reference to the harbors of Los Angeles and Long Beach and an appropriation for a channel to make both harbors more available for shipping, is acknowledged.

This department's view on this matter was expressed in a general way in a letter to the Secretary of War, dated December 6, 1917, which read as follows:

"There is forwarded herewith for your consideration a letter from the harbor commissioners of the city of Los Angeles, with indorsements thereon.

"The building of such a dry dock as is referred to in the within correspondence at Los Angeles, would undoubtedly be of the greatest advantage to both the Navy and the commerce of the Pacific, and anything that the War Department can do to facilitate the construction and use of such a dock will in my opinion be warranted by the benefits to be derived therefrom."

As you are aware, this department has had a number of submarines built at Long Beach, and there are now three being constructed there. As you also are aware, the city of Los Angeles has not only provided a temporary operating base for submarines on a pier belonging to the city but has given a site for a permanent submarine base to the Navy Department, the development of which is only awaiting the necessary appropriation.

The above makes the Navy Department's direct interest in a further improvement of Los Angeles Harbor very apparent, and with the increased merchant marine now building and to be built in addition to the increased number of vessels of the Navy, the necessity for further docking facilities and repair facilities at this important harbor can not well be overstated.

Sincerely, yours,

JOSEPHUS DANIELS,
Secretary of the Navy.

Hon. JAS. D. PHELAN,
United States Senate.

I will state that there have been recently launched and accepted by the Government two other submarines and the largest lighthouse tender that was ever constructed, which is now in Alaskan waters, constructed in Long Beach Harbor.

We are in somewhat of an anomalous position, gentlemen. We are not asking for anything for ourselves. Long Beach has developed its part of the harbor with its own funds. We have spent to date \$2,155,000 in Long Beach Harbor. We have two dredges ready to start to work immediately on that part of the channel which lies within the municipal limits of Long Beach. The major part of the work will be done by the city of Long Beach. We are simply asking a chance to spend our money and to keep pace with our very rapidly growing industries. We must have this channel in order to keep faith with the people we have brought there, and the importance to the Government and to the country at large of this industrial dis-

trict can hardly be overestimated. It is surprising ourselves—the rapidity with which it is being developed. This channel will give transportation to the people working in the factories. We have the very best of housing facilities. We have no fuel difficulties. This site [indicating] is being occupied by the Union Oil Company for a refinery. We have no difficulties of climate. We can work 365 days of the year if it is necessary.

Mr. SWITZER. You haven't found it as cold there as it is here?

Mr. VAN DE WATER. No, sir. As to the matter of physical features and technical questions I will refer that to Mr. Windham with the committee's consent.

Mr. FREAR. I understand Long Beach has made a contribution. You have your harbor facilities now?

Mr. VAN DE WATER. We have our harbor facilities.

Mr. FREAR. But this is to dig a canal from Long Beach over to Los Angeles and you people have raised a fund for building——

Mr. VAN DE WATER. We have the funds.

Mr. FREAR. We have here presented very strong resolutions and telegrams from people of Los Angeles. The Government has spent a lot of money on Los Angeles, but why does not Los Angeles build her part of the canal?

Mr. VAN DE WATER. Of course, Los Angeles has been called upon to spend a great deal of their own money upon the harbor. That has already been done.

Mr. OSBORNE of California. About how much?

Mr. VAN DE WATER. That I can't state. Can you, Mr. Windham?

Mr. WINDHAM. I think between five and six million dollars.

And in answer to that question as to Los Angeles not doing that at this time, I will state that they have no harbor funds on hand and at this time no way of doing it.

Mr. FREAR. What have you people spent on the harbor?

Mr. VAN DE WATER. \$2,155,000.

Mr. FREAR. What is the proportionate size of Long Beach to Los Angeles?

Mr. VAN DE WATER. In the matter of population, Los Angeles, I believe, has about 600,000 people now. Long Beach, giving the official figures, has something over 42,000.

Mr. FREAR. Los Angeles is twelve times as large as your town and you have spent \$2,000,000.

Mr. VAN DE WATER. Yes, sir.

Mr. OSBORNE. Isn't it a fact, in addition to this five or six million dollars, that Los Angeles is spending four million five hundred thousand to carry off the silt there and——

Mr. VAN DE WATER. Yes, sir; Mr. Osborne.

Mr. OSBORNE. Making seven or eight million dollars Los Angeles has spent on the harbor while the Government has spent less than six million?

Mr. VAN DE WATER. Yes, sir.

Mr. FREAR. What is the depth of your water?

Mr. VAN DE WATER. Eighteen feet.

Mr. FREAR. What can you float; what is your tide?

Mr. VAN DE WATER. Our maximum tide is about 7 feet 2 inches.

Mr. FREAR. The Secretary of War, as I understand, has not recommended this as especially important at this time for war purposes

and the Secretary of the Navy, while he speaks in general terms as to the desirability of it, do you understand he recommends this project as a war measure?

Mr. VAN DE WATER. That question I could not answer. I am a business man and I am not familiar enough——

Mr. FREAR. Your judgment is good——

Mr. VAN DE WATER. This project appeals to us as a business proposition. We know from our experience there that this work is valuable. And is vital to the expansion work that is directly in line with the work the Government has in hand to-day—that is, the prosecution of the war.

The CHAIRMAN. I will make a statement here and follow with a question. This project has been very urgently presented to the committee by Capt. Osborne, a member of the committee; by Mr. Randall; and Senator Phelan appeared in person before the committee and urged its adoption, so that at this end it has not been neglected. I agree with Capt. Osborne that it is an expression of certainly great local interest and very creditable to the civic pride of Long Beach to have sent you gentlemen this long distance to present it to the committee. This is a new project. The committee have not yet definitely determined as to new projects but whatever the final conclusion may be upon that point, if this project could be so presented to the War Department as to associate it intimately as an essential in the prosecution of the war you would certainly have made very great progress toward getting it adopted in the present bill.

You read a letter from the Secretary of the Navy which, as has been stated, was quite general in its terms and also one from the vice president of the Emergency Fleet Corporation in which he emphasizes the general importance of this project and expressing my own views I don't for a moment doubt its importance. It has a most favorable report from the Chief of Engineers and your very clear statement supplemental to what has already been presented to the committee certainly emphasizes its importance. But if the Secretary of the Navy and the Emergency Fleet Corporation, through the Shipping Board, can produce evidence and submit it to the Secretary of War with the Chief of Engineers tending to associate this as an essential project in the prosecution of the war, it is, no matter what the ultimate action of the committee regarding new projects may be, quite important to the project.

I say present to the Secretary of War; it could be presented to this committee and will ultimately be presented in that light, but the reason I suggested having the Shipping Board or the Secretary of the Navy first present it to the War Department is the fact that it has involved in its presentation technical question showing its necessity and I am sure you will find the War Department responsive to any suggestions or fact or evidence of that character and they are better equipped to study it in that light and make a preliminary report to the committee than perhaps if the committee were to take it up originally.

Mr. VAN DE WATER. I thank you. I am glad to have that suggestion.

The CHAIRMAN. If that is any contribution to the mission of you gentlemen, you are welcome to it.

Mr. DUPRÉ. I can't as a part of this committee acquiesce in the abdication of power indicated in the chairman's remarks.

The CHAIRMAN. It wasn't intended to express any abdication of power, but it was intended as a suggestion that the letters presented from the vice president of the Emergency Fleet Corporation and Secretary of the Navy do primarily associate it with the prosecution of the war. They tend, as I interpret them in the reading, to emphasize its importance and as evidence in that respect it is of value.

Mr. OSBORNE. It seems to me that it is hardly so well defined as to be absolutely clear and it must depend upon the judgment of somebody and I don't know anyone who is better qualified so far as the official acts of this committee is concerned, to judge upon that matter any better than the committee themselves.

I take pleasure in introducing Mr. C. H. Windham, former mayor of Long Beach and one of its most respected citizens.

STATEMENT OF MR. C. H. WINDHAM, FORMER MAYOR OF THE CITY OF LONG BEACH, CAL.

The CHAIRMAN. State your official position.

Mr. WINDHAM. I am sent here by the city of Long Beach. The city commissioners requested that I come on account of my having been acquainted with the conditions there so many years.

The CHAIRMAN. You were formerly mayor of Long Beach?

Mr. WINDHAM. Yes, sir, for two terms. Mr. Chairman and gentlemen of the committee, just before leaving Long Beach we had prepared this map as showing the different industries on the two ends of the harbor and the number of men and women employed in the different industries and I think I realize now just what you gentlemen want and that is, whether or not this channel is an immediate necessity in order to further the work of shipbuilding and canning food products, which are essential as war measures.

We have now employed at Los Angeles Shipbuilding Co. located here [indicating] 4,800 men and the general manager informed me that they expect to have about 6,500 men within the next 60 days.

We have at Long Beach at the present time 1,180 men in shipbuilding and the work will require an additional number of men to make that 2,000 within the next 60 days.

We have in Los Angeles employed in food products and fish canning 4,300 men and women, and in Long Beach at the present time a little over 1,000 men and women.

We have a total there in Los Angeles of 14,000 and in Long Beach of 4,900, making a total of men and women employed in the harbor districts of over 19,000.

While it appears that we have at the present time at Long Beach an ocean entrance, that ocean entrance shoals at different times and last year it shoaled to the extent that the submarines built here for the Government on trial trip couldn't get back into the harbor but were hung on the sand bar for some time. This appropriation that Long Beach has voted for \$300,000 for cleaning out the silt in her channel, taking that part of the connecting channel lying within the city limits of Long Beach, out of this sum they had to spend \$35,000—they completed the work about three weeks ago—in the last 90

days they have spent \$35,000 of that money in order to get the submarines back and forth to the shipyards.

They have under construction here three 6,000-ton steel boats for the emergency fleet and three submarines that are nearly ready to launch and we have to continue to dredge this channel as often as it shoals in order to keep that entrance open for the ships to go back and forth; and out of this appropriation if we continue to have to dredge that ocean entrance it may be that we will find that we won't have enough money to clean out the silt in the harbor and the connecting channel. Whereas, if we can have this channel dredged in the immediate future even if this should shoal we will have this way open between the shipyards and as the labor is increasing, in the harbor the congested condition of only one street car line around the harbor makes it practically impossible to get those people back and forth without great delay and great inconvenience. If we had that channel even deep enough for small boats through there it would facilitate transportation very greatly. I doubt whether there is another place in the United States of the same population that can increase shipbuilding in the near future as much as these two localities.

In the first place we don't have a great many kinds of work for our people and the kind of men that we need in shipbuilding coming from automobile garages and all those things from all the inland towns around there, and from as far east as Kansas City and Denver, and all those places, will come in as fast as we need men. I don't believe that there is any question but what we can add four or five thousand men to the shipbuilding there during the present year if we can take care of them.

The appropriations as made, as Mr. Osborne has said, the county of Los Angeles of which the city has a majority vote, has just voted \$1,500,000 for flood control—the city of Los Angeles is 60 per cent of that vote—and you will notice the part of the channel we are asking the Government to dredge within the city of Los Angeles is a part of the turning basin of Los Angeles which will eventually be 2,100 feet in width here. If we could spend our own money over here at the present time we wouldn't ask you to assist us but we would spend our own money and then ask the Government later on, but we can't spend money outside of the city limits of Long Beach, and Los Angeles at this time has no money which they could use for harbor purposes.

The CHAIRMAN. Up to what point there do the city limits of Long Beach extend?

Mr. WINDHAM. To this point here [showing]. Within the city limits of Long Beach there are over 7,000 feet to be dredged there. Part of that channel is dredged now, there are 4,000 feet of it dredged now, so that small boats can go through, and we will have to extend that to the city limits and deepen and widen it some.

The CHAIRMAN. Do the city limits of Long Beach abut on the city limits of Los Angeles?

Mr. WINDHAM. Yes, sir. At this point, this will open up an area on this channel which can be used for all kinds of industries and this in green [indicating], 325 acres, belongs to the city of Los Angeles by a recent court decision and also this part in here [indi-

cating] and we are asking this help because we have no other way of helping ourselves. If we had any other way we wouldn't do it.

Mr. RANDALL. How is that green territory occupied at the present time?

Mr. WINDHAM. It is unoccupied. That was claimed by private interests and taken into court.

Mr. RANDALL. Are there any interests that would go there and develop it if this canal was dug?

Mr. WINDHAM. The chairman of the Harbor Commission of Los Angeles said to Mr. Vandewater and myself the other day that if that channel was dug he didn't believe that there was any question but that they would be able to locate another shipyard at that place. The land was suitable for it and the area was so large and they had several inquiries looking to shipbuilding plants and he believed it was very possible that they could locate another yard there. I think as far as men are concerned we could easily supply the men for another yard in that locality.

If there are any questions any of you gentlemen would like to bring out in that regard I would be very glad to answer them.

Mr. FREAR. How long would it take to dredge that channel to be of service?

Mr. WINDHAM. To dredge it to 20 feet depth in low tide and 200 feet wide would take six or eight months' time.

Mr. FREAR. That is through to Los Angeles?

Mr. WINDHAM. Yes, sir. For small boats, say 6 or 8 feet draft at low tide, transportation of passengers and small traffic, I think that could be done within 120 days actual dredging time—four months.

Mr. LEA. As you finish this canal it becomes useful, doesn't it?

Mr. WINDHAM. Yes, sir; but I think in order to hurry this matter it would be best to take one cut first, a depth of 8 or 10 feet at low tide, so as to facilitate transportation of passengers at these different places and then follow with the second cut.

Mr. FREAR. Would the extension of this canal on to Los Angeles increase the value of these 325 acres of land you just spoke of?

Mr. WINDHAM. I don't think they have any idea of increase, because they are leasing on very low terms to people to get the industries located there rather than receiving profits on the land values. It is more a matter of getting industries there than it is of increasing values.

The CHAIRMAN. Mr. Windham, if it met with the approval of the city of Long Beach it is probable that under the terms of existing law you might obtain a permit from the War Department to excavate your part of that connection channel up to the city limits of Los Angeles, awaiting, of course, the formal adoption by Congress of the entire project authorizing the work which is recommended to be done by the United States.

Mr. WINDHAM. The difficulty in that, Mr. Chairman, is that the law does not permit the city of Long Beach to spend its bond money outside of its own limits.

The CHAIRMAN. I say you are to construct a certain part and it was with reference to the part which you are willing to construct to which my suggestion applies, that is to say, the obtaining of a permit from the War Department.

Mr. WINDHAM. You see this part being constructed there wouldn't get us through anywhere. You see we would have that other strip lying between.

Mr. OSBORNE. Isn't it a fact, Mr. Windham, referring to the matter of that land being brought out there that the city of Los Angeles, its policy is not and does not sell any land at all, that what land it has they lease at very low prices to shipyards and other concerns of that sort?

Mr. WINDHAM. Yes, sir; they do not sell any land at all and make the most favorable leases possible.

Mr. DUPRÉ. Mr. Windham, don't you think the people of Long Beach would be very loath to abandon their idea of the present outlet to the ocean?

Mr. WINDHAM. No, sir; I don't think that. They would be loath to continue to dredge that unless it was necessary without first having this done. It would then be easier to float additional money than to spend this money without getting relief, and there is another proposition and that is people who come to Long Beach have some question about the possibility of that ocean entrance being a permanent proposition whereas the thing would be assured that the United States Government through this committee was cooperating and making us a part of the general harbor. It would establish a confidence that would make it very advantageous toward building everything in our city and housing the men and pushing the thing forward as part of the general harbor proposition for all time. That is what we want to be, to be of one with this connecting channel. If there were any work to be done hereafter we wouldn't ask the Government to do that at all. We would do that ourselves.

Mr. LEA. About what is the distance from the entrance of Los Angeles Harbor to the entrance of Long Beach Harbor?

Mr. WINDHAM. The distance as they now stand would be something like 4 miles.

Mr. LEA. What scale is that map drawn on?

Mr. WINDHAM. The scale is 1 inch to a quarter of a mile.

Mr. FREAR. Then in taking a boat for the purpose of launching from Long Beach to the month of Los Angeles would be a distance by way of the canal of what, about 6 miles or thereabouts?

Mr. WINDHAM. Well, about 5 miles to the bay.

Mr. FREAR. About what distance now?

Mr. WINDHAM. About 4.

Mr. FREAR. About 4 miles then to the sea?

Mr. WINDHAM. No, not into the sea, would be about 1,800 feet.

Mr. FREAR. Would the shipbuilders then prefer to take that 5-mile trip rather than the short trip?

Mr. WINDHAM. Yes, sir; they would because the sea here is pretty rough at times, just simply a jetty extending out into the ocean whereas this would be absolutely safe by the connecting channel.

Mr. FREAR. They have lost vessels there before and built this shipyard with the expectation of using that as their harbor entrance?

Mr. WINDHAM. No, sir; their expectation has been this: This land was decided to the Government nearly eight years ago, and the thought has always been that this would be the permanent connecting link.

Mr. KENNEDY. Between the two harbors?

Mr. WINDHAM. Yes, sir. This has been a temporary matter, taking care of things, but, as I say, within the past ninety days we have spent \$35,000 of our money.

Mr. DUPRÉ. I think the gentleman that preceded you stated that some of the submarines that went out of the harbor had to lay up for some time before they could get back.

Mr. WINDHAM. Yes, sir.

Mr. LEA. Have you the same depth of water in Los Angeles that you have into Long Beach?

Mr. WINDHAM. No, sir, Los Angeles has 35 feet. We have only about 18.

Mr. KENNEDY. What do you mean by 18, low tide?

Mr. WINDHAM. Yes, sir.

Mr. KENNEDY. What is low tide?

Mr. WINDHAM. About seven feet, maximum.

Mr. FREAR. What depth is required to launch a 6,000-ton vessel or submarine?

Mr. WINDHAM. They can get around on 14 or 15 feet at low tide.

Mr. FREAR. So 20 feet would be plenty?

Mr. WINDHAM. Yes, sir, plenty.

Mr. FREAR. I thought these vessels they were building there were 8,800 ton vessels.

Mr. WINDHAM. That is Los Angeles, 6,000 at Long Beach Ship-building Co. That is at the present time. But the difficulty is this: if we have to spend our bond money in keeping this straight we lose that money and we don't get any result from it. Not only that, we don't know how often that may shoal or how fast we will have to spend it.

Mr. KENNEDY. Is it your intention to abandon the entrance of your own harbor if you get that canal through?

Mr. WINDHAM. I don't think it would be.

Mr. KENNEDY. You would have to spend money then just the same as now, wouldn't you?

Mr. WINDHAM. No, sir. I don't think they would unless they were to extend that jetty out, but that might be many years.

Mr. FREAR. To prevent it from shoaling?

Mr. WINDHAM. Yes, sir, but that is in the future. At the present time we have to depend on this channel for results entirely.

Mr. FREAR. If that channel isn't put through there, what will you do with your boats that are on the ways?

Mr. WINDHAM. We will simply have to keep using the bond money and dredge it out even if it exhausts it all, but it would leave us in very bad shape and the people feeling very bad to know that we had spent that money.

Mr. FREAR. Doesn't waste it. You have spent \$2,000,000 on it. Do you consider it wasted to keep up the entrance?

Mr. WINDHAM. I would consider the dredging, if it continues to shoal, to be wasted.

Mr. FREAR. That is what the Government will be constantly having to do.

Mr. WINDHAM. Yes, sir; but we can save that work if we can get this harbor in here.

Mr. KENNEDY. How much on the average does it cost to maintain the mouth of your harbor or outlet there?

Mr. WINDHAM. That would depend entirely upon the weather conditions. It might be as much one year as again in two or three.

Mr. KENNEDY. How long have you been maintaining it?

Mr. WINDHAM. We have been maintaining it or partially maintaining it for about six years.

Mr. KENNEDY. If you know how much you have spent in that period you could get the average.

Mr. WINDHAM. I think it would cost an average of about \$20,000 a year, but this year it has been worse than it has ever been. We had to spend \$35,000 recently in order to get those boats out. Whether we will have to spend another \$35,000 within the next week or a year we can't tell. It depends entirely on conditions.

Mr. KENNEDY. As I understand you, your present idea is to use this inside 20-foot canal, and if you grow to a size where you can take on an ambitious project, to put out these jetties, if you care to, and prevent shoaling altogether.

Mr. WINDHAM. You have stated it better than I could possibly do. That is it exactly.

Mr. OSBORNE. Isn't it a fact if the shipbuilding companies in Long Beach were to take contracts for some of these 8,800-ton ships they couldn't get them out at all?

Mr. WINDHAM. I don't think they could get them out at all, and I will say further that I feel satisfied that if Long Beach is given 5 or 10 of those boats that either one of these yards will be immediately enlarged and that will be taken care of or there would be another yard established. The feeling on our part is that we can easily take care of double the amount we are doing. We have the labor to do it and the people would gladly cooperate in doing it, but we are just simply where we had to ask for help which we cannot do ourselves. If we could do it ourselves we would be glad to do it. But on account of the law governing bond issues we are unable to spend money outside of the city limits, we have to stop and ask you to help us. I understand the financial condition of Los Angeles at the present time in regard to harbor matters is that it would be impossible for them to do it. But they have shown a willingness to cooperate as far as they could.

Mr. DUPRÉ. And also by sending an urgent telegram to the committee. [Laughter.]

Mr. WINDHAM. I will say that there is hearty cooperation between the cities of Los Angeles and Long Beach.

Mr. KENNEDY. What effect would this proposition you have stated here, if adopted, have on the maintenance of the ocean harbor?

Mr. WINDHAM. None at all, because that shoals from the ocean. It would eliminate itself from the harbor and it would—

The CHAIRMAN. I have a letter which was received this morning from the vice president and general manager of the Los Angeles Shipbuilding Co., dated January 30, which I will read, and if there is no objection make it a part of the record:

SAN PEDRO, CAL., January 30, 1918.

COMMITTEE ON RIVERS AND HARBORS,

House of Representatives

GENTLEMEN: We understand that there is a request before your honorable committee to arrange for an appropriation to connect the turning basin of the Los Angeles Harbor with the turning basin at Long Beach by the digging of a 12,000-foot canal.

We would suggest that the digging of this canal would materially aid the general ship building program which is at present going on in this vicinity, and is in line with the development of the west basin and the building of the dry dock, the construction of which is under consideration by the Emergency Fleet Corporation,

Yours, very truly,

LOS ANGELES SHIPBUILDING & DRY DOCK CO.

By

SAM L. NAPHITALY,

Vice President and General Manager.

Mr. WINDHAM. I will say that Mr. Gardner, the general superintendent, and Mr. Naphitaly, general manager of that yard, told me the day before I left that that channel would be of great importance to them in getting their men back and forth in a satisfactory manner. And in addition to the actual connection it would turn loose dredging in this harbor of something like a half a million dollars that would be spent immediately by private parties there in addition to the work; in other words the appropriation of \$130,000 would allow Long Beach to spend the balance of her \$300,000 immediately less \$35,000 that has been spent on the ocean entrance and at least \$500,000 in private money in the Long Beach end of the harbor.

Mr. FREAR. For what purpose?

Mr. WINDHAM. For providing for other industries. As fast as we can get deep water it is being taken up, largely for potash and fish and food canning. These other canals, they are uncompleted. they don't have water enough here to—

Mr. FREAR. You are not going to expect a greater depth than you have in here?

Mr. WINDHAM. In this channel here we would immediately dig to 30 feet in depth.

Mr. FREAR. Why don't you do that now? A 30-foot depth would be of no value for a 20-foot canal?

Mr. WINDHAM. The real reason is that the people that would do this work and locate here will not be so sure of it with that and will not make the investments at this time that they would make on ones that they are assured of, once they know they are a part of the general harbor—they would do this work.

Mr. FREAR. What is the object of putting a 30-foot waterway with only 20 feet waterway to carry the boats out?

Mr. WINDHAM. They would have that much work done, when in time this would no doubt be equal to that depth because the minute we divert this silt, which we expect to do within the next six months, before another winter's flood, then there is no more filling inside the harbor and any dredging you do there is permanent and it will be our purpose to have all this work done here to meet any condition that may be required.

Mr. TAYLOR of Arkansas: Have you stated the distance between the two cities, between the Long Beach Wharf and the Los Angeles Wharf?

Mr. WINDHAM. It is between 4 and 5 miles.

Mr. OSBORNE. Mr. Chairman, Mr. Ralph L. Criswell, a member of the city council of Los Angeles has entered the room and perhaps he would like to make some remarks.

The CHAIRMAN. We would like to hear Mr. Criswell. Give your name and official position to the stenographer, Mr. Criswell.

STATEMENT OF HON. RALPH L. CRISWELL, MEMBER OF THE CITY COUNCIL OF THE CITY OF LOS ANGELES, CAL.

Mr. CRISWELL. Mr. Chairman and gentlemen of the committee, I didn't expect to have anything to say. I am a member of the city council of the city of Los Angeles and in defense of having appeared facetiously to some of you gentlemen here I want to point out that San Pedro and Long Beach are equally related to the city of Los Angeles. You understand that Los Angeles is 24 miles up the country and San Pedro, while it is a part of the city of Los Angeles so far as police and laws are concerned, so far as the business interests and so forth are concerned it is no more a part of Los Angeles than Long Beach. That will explain to you why the commercial interests of Los Angeles are interested down here.

As to why Los Angeles does not appropriate the money to dredge its portion of that channel, the situation is that we have voted bonds for I think it is \$6,500,000 and that money has all been expended by the city of Los Angeles on that harbor and under our city charter we are bonded up to our limit and we can not vote any more funds. We would be very glad to do that if we could but we can not vote any other bonds for that or any other purpose at the present time. And therefore, as the gentlemen of Long Beach have explained to you, as they can not expend their money there and as we have no money to spend, we couldn't figure out anybody else on earth that did have any money except you gentlemen here and we hope that you will open your purse strings to the extent you can.

This place where the Los Angeles Shipbuilding & Drydock Co. is located, last July when they commenced work on there, it was tideland, the channel was dredged here, the ground was cleared and more than two months ago they launched their first vessel. That shows we try to do things.

And in answer to the question of the gentleman why they would try to dredge a 30-foot basin with only a 20-foot outlet I want to say that all this land in here is tideland. It has overflowed at different times according to the height of the tide, and the object of dredging it at this time is that they will use all of that they take out there in order to build up the land above the high water mark. It isn't that they want the 30 feet of water, but they can get the dirt there cheaper—

Mr. FREAR. Just a reclamation scheme.

Mr. CRISWELL. Yes, sir. They can get the dirt there cheaper than anywhere else.

Mr. FREAR. Is the city of San Pedro a separate corporation from Los Angeles?

Mr. CRISWELL. No. Let me explain that to you. I don't know that I can do that. There is a strip here, it is 16 miles long and only one-half mile wide—runs from the city of Los Angeles down here to the city of San Pedro. In order that we might have physical contact and then the people down here voted to become a part of the city of Los Angeles—

The CHAIRMAN. The city of Los Angeles annexed San Pedro in order to have a port?

Mr. CRISWELL. Well, yes, sir. The real reason for it was the city of San Pedro could not finance the building of wharves and ware-

houses and so on down here, while the city of Los Angeles could do it, but the city of Los Angeles would not do it unless it could get control of this land here. Now, we own practically all that harbor frontage. We wouldn't sell a foot of it to anybody. We will lease it on very favorable terms. In fact, we make leases of 30 years duration with a revaluation every 10 years, and we are leasing that land to industries just as fast as industries want it. Right in here [indicating] is what we call "Fish Harbor," we took the last money we had that was spent on the harbor and we fixed up a place over here for fish canneries and fertilizer works and so on, to get them as far away from the town as possible, and we have leased every foot of that land and, now, that was commenced only about a year ago or a little better.

The CHAIRMAN. You have at Los Angeles harbor there one of the few modern terminals in the United States.

Mr. CRISWELL. I beg your pardon.

The CHAIRMAN. You have one of the few modern water terminals in the United States.

Mr. CRISWELL. Yes, sir; we have. Nature didn't help us a great deal. We did most of the work ourselves. All we had was a little slough to commence and the building of this breakwater, which has stopped the shoaling such as they have over here.

And, now, I would like to say to the committee, and Mr. Windham will correct me if I am mistaken, but my remembrance is that the original plan of the development of this harbor here did not contemplate anything only an opening for very small boats here and that the original idea was that these harbors were to be connected and this was the entrance to the two harbors. In fact it is all one harbor—if you went down there and looked at it, Mr. Chairman and gentlemen of the committee, you couldn't tell where Long Beach Harbor commenced and where Los Angeles harbor quit, because it is all the same thing.

Mr. OSBORNE. Mr. Criswell, isn't it a fact, speaking of those terminals, that the city of Los Angeles sent its city engineer and its other engineers to all the harbors in the world, to all the great European harbors, and laid out this harbor with reference to having the most perfect harbor?

Mr. CRISWELL. That wasn't the city engineer.

Mr. OSBORNE. I mean the terminal.

Mr. CRISWELL. It wasn't the city engineer. It was engineers engaged by the harbor commission and they were especially engaged for that and they were specially engaged to construct the plan.

Mr. OSBORNE. And they went to all the harbors—

Mr. CRISWELL. Yes, sir; they went to Bremen and Amsterdam and Liverpool and so on. We think we have as good a harbor or better than any other harbor of its size in the world.

Mr. FREAR. About what income does Los Angeles receive annually from the harbor?

Mr. CRISWELL. I couldn't answer that question. I am not a member of the harbor committee of our council. I am not familiar with those figures and I only know in a general way. I know as much as I do about the harbor because I was appointed a special committee by the council about two months ago to investigate the placing of a fire boat in commission on that river and I made a great deal of inquiry

and I found that we have there in buildings, merchandise, etc., from here down about \$70,000,000, with inadequate fire protection and the day I left Los Angeles bids were opened that day for putting in a fire boat.

Mr. OSBORNE. In regard to that city rental, the city gets out of it, you understand, which I believe to be a fact, that the rental is merely nominal.

Mr. CRISWELL. We only claim to fix the rental at a value that it will only carry the interest on the bonds and the sinking fund.

Mr. FREAR. You spoke of a revaluation. I thought that had some basis for fixing the time of the rental.

Mr. CRISWELL. We might feel like raising the rental on them if a thing justified it, and we needed money for development in that vicinity there.

Mr. FREAR. To be perfectly frank the largest harbor, in New York City, they rent practically one-half of that wharfage to the terminal companies, don't they, Mr. Chairman?

The CHAIRMAN. They did formerly. They have not been renewing them.

Mr. CRISWELL. I just want to make clear to the committee that the city of Los Angeles is more interested in locating industries along here. It don't care if they locate at Long Beach because they come up to Los Angeles to bank their money and buy their goods just as though they were located over on this side.

Mr. LEA. In other words, the city is not trying to make money but to develop the country?

Mr. CRISWELL. Yes, sir.

Mr. OSBORNE. Mr. Chairman, I would like to ask Mr. Windham something about the housing conditions there that have a direct bearing on the situation.

Mr. WINDHAM. I didn't dwell on the housing conditions, Mr. Chairman, because I didn't want to bear on anything that would look like we were trying to build up our community, but it is a serious matter as regards the war proposition. There isn't to-day a house in San Pedro, or Wilmington, or Long Beach that is not occupied, I don't think, and with the additional men that will be required to do the work for the Los Angeles Shipbuilding Co. and another thousand in Long Beach Shipbuilding Co. there is not houses enough for all the people. We can get the men but not the houses, and if our city would receive word that the Government had recognized that by an appropriation for the connecting channel I venture to say a building boom would start in Long Beach for the housing of these people. We do not house just the Long Beach people but about half of the Wilmington and San Pedro people, but the building would be launched immediately to take care of all the people that would be required.

Mr. OSBORNE. And in that case the \$50,000,000 that we are about to vote for housing over the country, you wouldn't want any of it?

Mr. WINDHAM. I will say to you gentlemen we wouldn't want a dollar of it. We can supply the houses immediately. We can build immediately the houses. [Question was here asked by Mr. DUPRÉ: "Why does not Los Angeles treat you as it did San Pedro; annex you?"] All I can say is that you can certainly see we are very close together commercially.

The committee thereupon at 12.55 p. m. adjourned to meet again Wednesday morning at 10.30 o'clock.

APPENDIX A.

UNITED STATES SENATE,
COMMITTEE ON IRRIGATION AND RECLAMATION OF ARID LANDS.

January 25, 1918.

HON. JOHN H. SMALL,

*Chairman Committee on Rivers and Harbors,
House of Representatives.*

DEAR MR. SMALL: AS I suggested when I appeared before your committee recently in the interest of an appropriation of \$130,350 for a channel to connect the harbors of Los Angeles and Long Beach, I send you herewith a statement over the signature of the vice president and general manager of the United States Shipping Board, Mr. Charles Plez, setting forth from the viewpoint of the shipping board the advantage of doing the projected work at this time.

I send you also a copy of a telegram I have received from the president of the Long Beach Chamber of Commerce and the mayor of the city, bringing to light the additional fact that such a channel would make it possible to bring hulls constructed in Long Beach to outfitting plant being established at Los Angeles end of harbor where boilers and equipment can be rapidly installed.

I trust, therefore, in view of this additional evidence, which, from a shipbuilding, as well as a military standpoint, is set forth in the inclosures, your committee will feel disposed to include the item of \$130,350 in the rivers and harbors appropriation bill, as the Federal Government's quota of this harbor improvement.

Thanking your committee for its courteous consideration when I appeared before it, believe me,

Yours, very truly,

JAMES D. PHELAN.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 24, 1918.

HON. JAMES D. PHELAN,
United States Senate.

DEAR SENATOR PHELAN: Your letter of the 23d instant, addressed to Chairman E. N. Hurley, relative to the desire of the Rivers and Harbors Committee of the House of Representatives for an expression of opinion as to the importance of the item of \$130,000, which is under consideration for the improvement of Los Angeles Harbor, to the general construction program of the Emergency Fleet Corporation, has been referred to me for reply.

I beg to advise that we have contracts as follows with shipbuilding plants in Los Angeles Harbor:

Los Angeles Shipbuilding & Dry Dock Co., San Pedro, 18 steel vessels.

Fulton Shipbuilding Co., Wilmington, 4 wood hulls.

Ralph J. Chandler Co., Wilmington, 4 wood vessels.

The total dead-weight carrying capacity of these vessels will be nearly 200,000 tons, and the total cost over \$30,000,000, including the California Shipbuilding Co. contract.

The shipbuilding facilities of Los Angeles Harbor are rapidly growing, and anything that will be of general benefit to the harbor, such as the proposed new channel, will tend to promote the shipbuilding industry.

Not far distant, at Long Beach, there is the California Shipbuilding Co., which, in addition to contracts with the Navy Department, has a contract for three steel vessels with the Emergency Fleet Corporation.

In general, I am pleased to state that work on all the contracts with the Emergency Fleet Corporation, in Los Angeles and vicinity, is being carried on with great energy, and is deserving of every encouragement.

Very truly, yours,

CHARLES PIEZ,
Vice President and General Manager.

[Telegram.]

LONG BEACH, CAL., January 24, 1918.

HON. JAMES D. PHELAN,
United States Senator,

In House Document No. 460, Sixty-fourth Congress, United States Army Engineers recommended appropriation one hundred thirty thousand for dredging Los Angeles and connecting channel under certain conditions to be met by local interests. In order to work with Government Long Beach voted three hundred thousand bonds for dredging Long Beach end connecting channel and guaranteed maintenance same, with expectation that Government would make dredging possible when we met conditions and provided for our part of work. Six thousand men now employed construction thirty-six millions ships for Government in Los Angeles-Long Beach Harbor. Three thousand men and women employed canning food products. Connecting channel urgently needed to afford additional space for shipbuilding and canning industries. Connecting channel will afford direct rapid transportation from workers' homes to all these industries. Workers lose much time now to and from plants account traffic congestion. Connecting channel will make possible passage hulls constructed in Long Beach Harbor directly to large outfitting plant being established Los Angeles end of harbor, where boilers and equipment can be rapidly installed. Government engineers recognize strategic value connecting channel for military purposes. Government action now will stimulate much private dredging, making possible large industrial development.

W. T. LISENBY, Mayor.

C. F. VAN DE WATER,

President Chamber of Commerce.

Whereas a project for dredging a channel between Los Angeles and Long Beach Harbors is now pending before Congress; and

Whereas it is understood that Federal authorities desire assurance that the maintenance of such channel, when once dredged, will not devolve upon the United States pending the completion of the proposed silt diversion project; Therefore

Be it resolved by the city council of the city of Los Angeles that, in case said channel is dredged before the proposed silt diversion project is completed, the city of Los Angeles will assume responsibility for the maintenance of that portion of said channel which lies within the city of Los Angeles until the proposed silt diversion project is completed.

I, Chas. L. Wilde, hereby certify that the foregoing resolution was adopted by the city council at its meeting held Friday, January 18, 1918.

CHAS. L. WILDE, City Clerk.

RESOLUTION No. B 705.

Resolution pledging the city of Long Beach to maintain that portion of the proposed channel connecting Long Beach Harbor and Los Angeles Harbor lying within the corporate limits of the city of Long Beach until the completion of the flood-control channel through the city of Long Beach.

Whereas the city of Long Beach has voted, and the Supreme Court of the State of California has approved the validity of, certain bonds for the purpose of raising money for the construction of that portion of a connecting channel between Long Beach Harbor and Los Angeles Harbor, lying within the corporate limits of the city of Long Beach; and

Whereas the city of Long beach is desirous of having the United States Government appropriate sufficient funds for the completion of said connecting channel from the corporate limits of the city of Long Beach to and connecting with the Los Angeles Harbor;

Now therefore the legislative body of the city of Long Beach resolves as follows:

SECTION 1. That the city of Long Beach hereby pledges the United States Government that it will, at its own cost and expense, and without cost and expense to the United States Government, maintain that portion of said con-

necting channel lying within the city limits of the city of Long Beach until the completion of the flood-control channel through the city of Long Beach.

Sec. 2. The city clerk shall certify to the passage of this resolution and cause the same to be posted in three conspicuous places in the city of Long Beach and the same shall thereupon take effect.

I hereby certify that the foregoing resolution was adopted by the legislative body of the city of Long Beach at its meeting of January 17, 1918, by the following vote:

Ayes: Commissioners Hargis, Williams, Tincher, Lisenby, Riley. Noes: Commissioners, none. Absent: Commissioners, none.

[SEAL.]

H. C. WAUGHOP, *City Clerk.*

AFFIDAVIT OF POSTING.

STATE OF CALIFORNIA,

County of Los Angeles, city of Long Beach, ss:

H. C. Waughop, being duly sworn, says that he is city clerk of the city of Long Beach; and that on the 17th day of January, A. D. 1918, he posted three true and correct copies of the foregoing resolution in three conspicuous places in the city of Long Beach, to wit, one of said copies at the entrance to the office of the city clerk of the city of Long Beach, one of said copies at the entrance to the office of the tax and license collector of the city of Long Beach, and one of said copies at the entrance to the legislative chamber where the legislative body of the city of Long Beach meets regularly.

H. C. WAUGHOP, *City Clerk.*

Subscribed and sworn to before me this 17th day of January, A. D. 1918.

[SEAL.]

MARGARET WALKER,

*Notary Public in and for the County of Los Angeles,
State of California.*

STATE OF CALIFORNIA,

County of Los Angeles, city of Long Beach, ss:

I, H. C. Waughop, city clerk of the city of Long Beach, do hereby certify that the foregoing is a true and correct copy of Resolution No. B 705, as appears of record in the city clerk's office.

H. C. WAUGHOP, *City Clerk.*



75-

MISSISSIPPI RIVER—IMPOUNDING OF WATER ABOVE KEOKUK DAM

HEARINGS

ON THE SUBJECT OF

HOUSE RESOLUTION 468

DIRECTING AN INVESTIGATION OF THE ALLEGED IMPOUND-
ING OF WATER ABOVE THE DAM IN THE MISSISSIPPI
RIVER AT KEOKUK AND ITS EFFECT UPON THE
NAVIGATION OF THE RIVER

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FOURTH CONGRESS

CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman*.

GEORGE F. BURGESS, Texas.

CHARLES G. EDWARDS, Georgia.

JOHN H. SMALL, North Carolina.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

DANIEL A. DRISCOLL, New York.

THOMAS J. SCULLY, New Jersey.

CHARLES LIEB, Indiana.

WILLIAM KETTNER, California.

SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.

H. GARLAND DUPRÉ, Louisiana.

WILLIAM E. HUMPHREY, Washington.

CHARLES A. KENNEDY, Iowa.

ANDREW J. BARCHFELD, Pennsylvania.

ROBERT M. SWITZER, Ohio.

ALLEN T. TREADWAY, Massachusetts.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

FEBRUARY 14 AND 15, 1917

WASHINGTON
GOVERNMENT PRINTING OFFICE

1917



MISSISSIPPI RIVER—IMPOUNDING OF WATER ABOVE KEOKUK DAM.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Wednesday, February 14, 1917.

The committee met at 10 o'clock, a. m., Hon. John H. Small presiding.

Mr. SMALL. Gentlemen, we have before us House resolution 468 introduced by Mr. Rainey, providing that the Committee on Rivers and Harbors of the House of Representatives be authorized and directed to investigate the alleged impounding of water above the dam in the Mississippi River at Keokuk, and its effect upon the navigation of the river, and to report to the House the result of its investigations with all convenient speed. I will ask Mr. Rainey to indicate the order of procedure, and we will be glad to hear from him.

STATEMENT OF HON. HENRY T. RAINEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS.

Mr. RAINEY. Mr. Chairman, perhaps I had better explain briefly—

Mr. SMALL (interposing). Pardon me for interrupting you, but I understand there are gentlemen here who represent other views on the matter, and I wish to say that they will have an opportunity also to be heard.

Mr. RAINEY. Mr. Chairman, perhaps I had better explain briefly to the committee the history of this dam, what it was intended to accomplish, and what it is accomplishing. This is the largest dam ever built across any river in the United States, and perhaps in the world, except the dam at Assuan, on the upper Nile. Authority to build it was obtained by special act of Congress, which passed the House on the 27th day of January, 1905, without amendment, being reported out by the Committee on Interstate and Foreign Commerce; and four days later, without amendment, it passed the Senate. Soon afterwards the construction of this dam commenced. The statement was made on the floor of the House when the bill passed the House that Keokuk and Hamilton, the towns on either side of the Mississippi River, where the dam is constructed, wanted the structure very much; that it was a local organization that asked for the permit, and that the dam would cost \$1,000,000. The dam has now been built, and it is said to have cost \$25,000,000. The act granted to the Keokuk & Hamilton Power Co. the right to build this structure. As is usual in cases of this kind, the Keokuk & Hamilton Power Co. immediately transferred their franchise. They sold their franchise to Hugh L. Cooper for \$20,000 in cash.

Mr. GALLAGHER. \$20,000 in what?

Mr. RAINEY. \$20,000 in cash. It was supposed to be in cash, and I believe it was. Hugh L. Cooper is the great engineer who had

charge of building the great dam on the upper Nile. He at once organized a company which he called the Mississippi River Power Co., and that company built this dam. It has been in operation now about five years. After the dam was completed another company was organized known as the Mississippi River Power Distributing Co.

The Mississippi River Power Co. generate there at the dam 60,000 horsepower of electrical energy, and they can and do generate more than that, but that is the amount they send to St. Louis.

Mr. BOOHER. How much do they send to St. Louis?

Mr. RAINEY. Sixty thousand horsepower. The Mississippi River Power Co., the company which built the dam, carry this current to a point within 6 miles of St. Louis. They cross the Mississippi River with it and carry it through Illinois and to a point just above St. Louis. There they turn it over to the Mississippi River Power Distributing Co., a subsidiary company. That company has put in transformers, and they carry it the remaining 6 miles and deliver it to the United Railways Co. of St. Louis and the Union Electric & Power Co. of St. Louis. The United Railways Co. is the company in St. Louis which controls 100 miles of street car lines in that city. The Union Electric & Power Co. is the company in St. Louis which has been distributors of power generated from coal.

The companies to which this power is finally distributed or handed over to in St. Louis are controlled by the North American Co. The North American Co. holds a large block of stock in the Mississippi River Power Co., and through this arrangement the Mississippi River Power Co. has made a contract with the United Railways Co. of St. Louis, which means that for 99 years that company is to use this power; its price to be regulated by the price of power generated from coal. The delivery of the power to the Union Electric & Power Co., of course, precludes the possibility of there ever being in St. Louis any competition between coal and water power. Out in Illinois the Samuel Insull Co. owns the distributing companies which connect up with this dam. There are three of them and the electric current is delivered in Illinois through the Samuel Insull companies, and reaches the ultimate consumers in my congressional district at just about the price they have always paid for power and for light. These Samuel Insull companies go through central Illinois and buy up the local plants. I know of plants worth \$5,000—they have been offered for that amount—for which they have paid \$20,000. They bought up a plant in my home town.

Mr. BOOHER. Worth only \$5,000?

Mr. RAINEY. Yes; one at least of these plants.

Mr. BOOHER. Is that all it was worth, \$5,000, and they got \$20,000 for it?

Mr. RAINEY. Yes. They bought up a plant in my home town which had been just transferred for a consideration of \$18,000. They paid \$45,000 for it. They pay what any local concern wants to ask for their plant so they can get control of it. These companies connecting up with the dam on one side of the river in Illinois at Hull in my congressional district extend their lines across Illinois and connect up at Kincaid at the mouth of one of the largest bituminous coal mines in the world with a plant that produces electric current from coal. Therefore the building of this dam has not been of

any benefit at all to the section there so far as cheapening the cost of hydroelectric power for any purpose; in fact, I have never been able to discover how the building of this dam has benefited any living human being. It has not even benefited the persons who bought the stock, because it pays no dividends. The dividends go to these Stone & Webster and Samuel Insull companies, and the distributing companies are controlled, all of them, by the Stone & Webster and Insull power groups, and the persons who invested their money in this dam are getting nothing out of it at the present time at all. Now, what you are particularly interested in and what this resolution seeks to do is to investigate the question of the impounding of water above the dam.

Mr. SMALL. Before you take that up—I am not sure whether you cited the statutes which granted this power.

Mr. RAINEY. Yes; the original act passed the House on the 27th day of January, 1905. It granted a franchise to the Keokuk & Hamilton Power Co. to build this structure in the Mississippi River. Four days later the same bill, without any amendment at all, passed the Senate. Now, the singular thing about the construction of this dam is this: The report, prepared by Mr. Mann, of the Committee on Interstate and Foreign Commerce of the House, reports out a bill reciting that it is reported out unanimously by the committee, which was not the bill which was passed at all. The bill that was reported out under the Mann report contained this clause:

The Keokuk & Hamilton Water Power Co. shall furnish to the United States, without compensation, forever, sufficient and adequate power for operating the said lock and dry dock, lighting their surrounding grounds, and for lighting and heating their appurtenant buildings.

That was the bill that was reported out. There was, however, embraced in the report a bill which met the approval of the engineers, and the bill which met the approval of the engineers was the bill which was presented and which passed the House, and the bill which met the approval of the engineers contained this clause and not the clause I read at all, which of course is a popular clause in a bill of this kind:

The consent of Congress is hereby given to the Keokuk & Hamilton Water Power Co., a corporation created and organized under the laws of the State of Illinois, its successors and assigns, to erect, construct, and operate and maintain a dam with its crest at an elevation of about 30 feet above standard low water.

Now, the clause I have read in the first place was stricken out of the bill entirely.

Mr. TREADWAY. Stricken out by the committee or on the floor of the House?

Mr. RAINEY. No; it was not stricken out on the floor. The bill that was reported out by the committee was not presented on the floor for passage. The bill that met with the approval of the engineers was the bill that was presented for passage and did pass.

Mr. HUMPHREY. That is a rather peculiar circumstance, especially when you consider that Mr. Mann had charge of it. What does the record show about that? Have you examined the debate?

Mr. RAINEY. There was not any debate.

Mr. HUMPHREY. He is the last man I can think of who would let a thing of that kind go through without noticing it.

Mr. TREADWAY. Do I understand that the report of the committee was written about one bill and the actual bill before the House was an entirely different bill?

Mr. RAINEY. An entirely different bill.

Mr. TREADWAY. Is that correct?

Mr. RAINEY. Yes; that is correct.

Mr. KENNEDY. How did it ever come to be printed?

Mr. RAINEY. There is not any question about the passage of the other bill. The bill approved by the engineers is the bill that passed. I have examined a copy of the record all the way through, and there is not any question but that the bill which is now the law was properly passed, but it was not the bill which the committee reported out.

Mr. HUMPHREY. Was there any statement made by the man having the bill in charge when it was called up? Did the record show they had changed from the bill reported?

Mr. RAINEY. No; nothing at all. There may have been some agreement on the part of the committee to make the change; I do not know.

Mr. BOOHER. Was the bill that passed of the same number as the bill that was reported?

Mr. RAINEY. I do not know about that.

Mr. HUMPHREY. I do not see how it is possible for such a situation to arise—one bill reported and another bill passed.

Mr. RAINEY. Yes; that is just the situation.

Mr. HUMPHREY. The bill must have had a number to it. It must have been introduced or else it must have been amended on the floor.

Mr. RAINEY. It was not amended on the floor of the House and it was not amended in the Senate.

Mr. SMALL. As I understand, Mr. Rainey, it happened in this way: The report of the committee had reference to another bill rather than the bill which was actually reported, but the bill that was actually reported by the committee did pass.

Mr. RAINEY. The bill which was actually reported by the committee did not pass.

Mr. SMALL. Then I misunderstood you.

Mr. RAINEY. The bill as actually reported by the committee was not even presented to the House; but the bill which was printed in the report as meeting with the approval of the engineers did pass. I do not know how that happened.

Mr. HUMPHREY. I do not suppose it makes any difference about the merits of the case, but that is a very peculiar case.

Mr. RAINEY. It is very peculiar considering the accuracy with which Mr. Mann always presents these matters, and I can only account for it on the theory that there must have been an informal meeting and an agreement that in spite of the report made they would report the engineers' bill. But the point I want to make is this: The bill which the committee authorized and reported out authorized this company to maintain a crest above this dam of not to exceed 30 feet, and the bill that passed authorized this company to maintain a crest of 35 feet, making a difference of 5 feet to the cities above the river, a serious matter for cities which discharge their sewage into the river. Now that is not important at all except that it shows that the matter never received sufficient consideration in committee nor in the House itself, and that is one

reason why this Committee on Rivers and Harbors is now confronted with this problem.

The law authorizes the engineers to control the flow of water through that dam and over that dam, maintaining, however, a crest of not to exceed 35 feet, which is 5 feet more than the committee evidently intended. As a matter of fact, a crest is being maintained back of that dam sometimes of 40 feet, and never less than 36 feet, as these gentlemen who have been observing the tides there will testify later on.

Before the dam was constructed an agreement was entered into with the engineers, of which nobody was advised, by which the companies were authorized after the construction of the dam to impound water in the nighttime back of the dam, stopping the flow of the Mississippi River. In that connection I think I perhaps should read a statement of Mr. Marsh, president of one of the bridge companies up there, as to how this was done. This is a statement of Mr. B. O. Marsh, who is a civil engineer, as I understand it, living at Warsaw, Ill., near this structure.

Mr. FREAR. Mr. Rainey, will you put in the record a citation to that hearing or whatever it is, so we can refer to it.

Mr. RAINEY. I understand Mr. Marsh is a civil engineer.

Mr. FREAR. Is this statement taken from a hearing?

Mr. RAINEY. Yes; I want to read from his statement.

Mr. KENNEDY. Won't you also put in Col. Taylor's statement given at the same hearing?

Mr. RAINEY. Yes; I will be very glad to. This is Mr. Marsh's statement which he read or inserted in the record or something at a hearing had before the Committee on Interstate and Foreign Commerce on January 17, 1913, on certain bills which were bridge bills.

I will state before I read this statement that this company was financed and sold its bonds in London.

Mr. TREADWAY. Mr. Rainey, which company are you referring to now? You have spoken of three companies, I think.

Mr. RAINEY. The company which built the dam.

Mr. TREADWAY. As I understand you, one company got the franchise or right under the bill?

Mr. RAINEY. Yes; the Keokuk & Hamilton Power Co. got the right under the bill to construct the dam.

Mr. TREADWAY. And they sold that for \$20,000?

Mr. RAINEY. They sold that for \$20,000 to Hugh L. Cooper.

Mr. TREADWAY. Then what did Hugh L. Cooper do?

Mr. RAINEY. Hugh L. Cooper organized the Mississippi River Power Co., which built the dam and still operates it.

Mr. TREADWAY. And when you speak of "the company" you refer to this third company?

Mr. RAINEY. Yes.

Mr. GALLAGHER. Then there is another company which distributes the power?

Mr. RAINEY. Yes; there were others organized later on.

Mr. TREADWAY. The company which built the dam is the company to which you are now referring; is that right, Mr. Rainey?

Mr. RAINEY. Yes; the Mississippi River Power Co.

Mr. HUMPHREY. If it would not inconvenience you or interrupt the trend of your argument, I would like to ask you to tell us just

what you want done. I have been wondering what it is you want this committee to do.

Mr. RAINEY. We want to stop the impounding of the water above the dam, and I want to show now the reasons for the impounding of this water.

Mr. HUMPHREY. The gist of your complaint is that the company is impounding the water above this dam to the injury of some of the cities in that locality?

Mr. RAINEY. To the injury of navigation on the river below the dam. This company was financed on the strength of the contract it had made to deliver 60,000 horsepower of electrical energy in St. Louis at a certain price, and also upon the theory that they could develop there 300,000 horsepower of electrical energy; and also upon the theory that they could compel the Government to pay for operating the lock and for lighting the lock. The latter they have never attempted to do under that act. They are still operating the lock and lighting the lock, but under the act they probably could compel the Government to pay them, if the Government did not amend the act, and it is subject at all times to amendment. They have never attempted that, however, but they represented that they could develop there 300,000 horsepower of electrical energy. As a matter of fact, they can not do it, and they never could do it. They sold their stock and placed them under false pretenses. They can only develop there 74,000 horsepower at low water without impounding the water. Now, this is a copy of a letter which I obtained from the War Department on January 13, 1914:

WAR DEPARTMENT,
OFFICE OF CHIEF OF ENGINEERS,
Washington, January 13, 1914.

HON. HENRY T. RAINEY,
United States House of Representatives.

SIR: In reply to your letter of the 2d instant, requesting information as to the electrical energy that may be developed on the Mississippi River at Keokuk, I have the honor to quote for your information from a report made by the district engineer at Rock Island, Ill.:

"The average power that can be generated at Keokuk at low water without impounding the water is 77,273 horsepower.

"If water is stored at night to the full extent authorized by the War Department, the average low-water output during 10 hours of darkness will be 38,636 horsepower, and the corresponding average output in the daytime will be 104,870 horsepower.

"The output is not affected by the river being frozen over."

DAN C. KINGMAN,
Chief of Engineers, United States Army.

This company had represented they could develop 300,000 horsepower.

Mr. TREADWAY. May I interrupt you there?

Mr. RAINEY. Certainly.

Mr. TREADWAY. Does it make any difference to Congress or to this committee what they may have done in selling stock or bonds if the people wanted to be gulled into buying them? Why are we a party to that transaction?

Mr. RAINEY. That is my position absolutely; but in order to make good to any degree at all on the promises to investors, they were compelled to get permission from the engineers to impound this water.

Mr. TREADWAY. You claim there is a difference of 5 feet between what the bill entitles them to impound and what they actually do impound; is that it?

Mr. RAINEY. No; the bill entitles them to maintain a crest there of 35 feet.

Mr. TREADWAY. I understood you to say 30 feet, and that they actually maintained a crest of 35 feet.

Mr. RAINEY. The bill that was not passed authorized a crest of 30 feet. The committee, according to this report, authorized them to maintain a crest of 30 feet, but the bill that passed authorized them to maintain a crest of 35 feet, and they do maintain actually a crest of 40 feet.

Mr. TREADWAY. Then you claim that they still impound 5 feet more than they ought to?

Mr. RAINEY. Yes.

Mr. TREADWAY. If they were entitled under the bill to 35 feet and are actually impounding 30 feet, your representation is that they are taking 5 feet more than they should, and as a result of that there is not water enough going down below the dam for navigation on the river; is that the point?

Mr. RAINEY. That is the point exactly.

Mr. TREADWAY. And that is the point where Congress or this committee comes in?

Mr. RAINEY. Yes; that is where this committee comes in.

Mr. TREADWAY. I understand that; but this financial proposition has nothing whatever to do with the question before us.

Mr. RAINEY. I thought the committee might be interested in knowing the reasons for this arrangement. Of course, they can only develop 74,000 horsepower at low water—and low-water measurement is always the measurement considered—unless this Government through its engineers permits them to impound a larger amount of water back of the dam, so that during the hours of daytime they can develop more energy. The question is whether this dam is constructed there for the purpose of enabling this company to pay some possible dividends at some time in the future on its investment, no matter what effect it might have on the navigation of this river. If this water is impounded there in the nighttime in these large quantities and then let out in the daytime, it goes down the river in great waves making a swale following the waves and destroying the channels in the river. Of course, the channel does not go straight down the river, as this committee understands better than I do, the channel crosses the river frequently, and this irregular flow fills up the channels in the river and the pilots can not always tell where the channel is, and they can never tell how much water they have got. The water varies sometimes a foot or so at the same hour on different days; that is, at 7 o'clock this morning the water will be at a certain depth at a certain point, and at 7 o'clock to-morrow morning it will vary several inches and possibly a foot, and boats coming up the river and boats going down the river ground frequently, sometimes losing on a trip from 15 to 20 hours in time, and sometimes they have to make some arrangement with this company up there, and ask them to permit enough water to come down the river below the dam so as to permit them to operate their boats and get from the dam to St. Louis.

Mr. TREADWAY. If you will allow me to ask you two more questions, I will endeavor not to interrupt you again.

Mr. RAINEY. That is all right.

Mr. TREADWAY. You speak of 5 feet of unlawful water, we might say, by impounding water back of the dam.

Mr. RAINEY. Yes.

Mr. TREADWAY. Do I understand from that statement that the dam is 5 feet higher than it should have been built under the statute as passed by Congress.

Mr. RAINEY. I do not know, and I imagine nobody does know, except the company, how much is impounded.

Mr. TREADWAY. Let me finish the idea I had in mind before you answer, if that is agreeable. How could the water be impounded 5 feet higher than the height of the dam and hold it? How do they keep the water there unless the dam is that high?

Mr. RAINEY. I will show you how they do it.

Mr. KENNEDY. They have gates.

Mr. RAINEY. They built across the river there a stone dam.

Mr. TREADWAY. That is the regular dam you are speaking of now?

Mr. RAINEY. Yes; with a crest possibly not over 30 feet high.

Mr. TREADWAY. And by the crest you mean the upper surface of the dam?

Mr. RAINEY. Yes. Then they built another structure on that—I do not know how many feet high that is.

Capt. STRECKFUS. Eleven feet above that.

Mr. FREAR. What is that called?

Mr. RAINEY. I do not know what it is called.

Mr. HUMPHREY. They had a permit to do that, did they?

Mr. RAINEY. The engineers approved the whole plan. That is 11 feet higher. Of course this top then would be much higher than any crest possibly could be under the law authorizing the structure. In this superstructure there are placed numerous gates all the way across the river which open and close. When the gates are closed, they can hold the crest of that water to the top of that superstructure, if they want to. They do not hold it that high, but they can hold it just as high as they please, and then by opening the gates they can let it out.

Mr. TREADWAY. Do you claim that the superstructure is illegal?

Mr. RAINEY. No; I do not know that it is.

Mr. TREADWAY. Where did the company get authority to build that superstructure 11 feet higher than the dam?

Mr. RAINEY. The engineers approved it all.

Mr. TREADWAY. But did the Board of Engineers have a right to give a permit contrary to the act which was passed by Congress?

Mr. RAINEY. The question is whether that is contrary to the act or not. The engineers, I presume, take the position that the crest they are required to maintain means the water surface or the surface of the pool just above the dam, and that they could build this superstructure 100 feet high if they wanted to.

Mr. TREADWAY. As long as it is back from the dam a little ways?

Mr. RAINEY. They built it right on the dam.

Mr. HUMPHREY. But it does not matter about the structure; the only question involved is the height of the water.

Mr. RAINEY. Yes; the height of the water above low water I think should be considered the crest, and the height of the water above low water has not been less than 36 feet for a long time, and of course in time of flood it goes much beyond that.

Mr. RAINEY. Of course, if they do not impound the water above 35 feet, then the fact that the structure is higher than that, I think, does not make any difference. The closing of the gates enables them to maintain the flood back there in excess of 35 feet.

Mr. TREADWAY. It produces an inequality of the amount of water during the 24 hours below the dam.

Mr. RAINEY. That is it exactly. That is the point with which this committee has to do.

Mr. TREADWAY. One other question. The inequality of the water below the dam is the point you are trying to obviate?

Mr. RAINEY. That is the point to which I am trying to call your attention, and the fact that it is affecting the navigation of the river below the dam.

Mr. TREADWAY. Have you any statistics showing what navigation is interfered with as a result of this inequality?

Mr. RAINEY. Yes; I will give you that later on. I have in my possession a protest against this impounding of the water, calling attention to the effect it has on the river below the dam, and that protest is signed by every navigator in that part of the river.

Mr. HUMPHREY. As I understand it, you are making no contention here that this structure is in violation of the permit?

Mr. RAINEY. Not at all.

Mr. HUMPHREY. The question is solely as to the effect it has on the navigation below the dam.

Mr. RAINEY. The effect it has on navigation below the dam, due to the obstruction of the natural flow.

Mr. TREADWAY. In that connection, Mr. Rainey, if it is not illegal, how can we act, provided your contention is correct? What remedy is there for the conditions below the dam, provided that superstructure is not illegal?

Mr. FREAR. Would not the remedy be a recommendation that the conditions should be such that navigation would not be impeded?

Mr. TAYLOR. We have the right to remove all obstructions to navigation.

Mr. FREAR. Certainly.

Mr. HUMPHREY. He makes no claim that the structure is illegal, but that it is used in such a way so that there is a violation of the act.

Mr. RAINEY. By obstructing the flow, and by raising the crest higher at times than the act permits, by permitting the water to flow out in great waves during certain hours of the 24 hours of the day, they produce waves in the lower river, followed by long swales, which makes the boats ground. There are only 21,000 cubic feet of water at low water flowing below the dam, anyway.

Mr. FREAR. Would it not also be true that irrespective of what has been granted by Congress in the past, if it interferes with navigation it might be the duty of Congress to modify the original act to permit navigation below the dam?

Mr. BOOHER. Is this a lock dam?

Mr. RAINEY. Yes, sir; it is. It is built at the lower end of the Des Moines Rapids, and there have always been locks there.

Mr. TAYLOR. Mr. Rainey, I heard your speech on the floor of the House in reference to this proposition, and I was very much interested in it. If your resolution is agreed to by Congress, will it affect the value of the power plant?

Mr. RAINEY. I presume it would affect their dividends; there is no question about that.

Mr. TREADWAY. I understood you to say they have not made any dividends?

Mr. RAINEY. If they did pay any. They did pay dividends at one time, I understand it. I made that statement before, and nobody has denied it, that they did pay dividends before they turned a single turbine wheel.

Mr. KENNEDY. They paid the interest on the bonds, as I understand it.

Mr. RAINEY. Perhaps that was it, before they had earned a cent. At any rate they are not paying dividends now.

I want to read Mr. Marsh's statement. He said:

Mr. Cooper, who bought out the rights of the original Keokuk & Hamilton Water Power Co., realized that the lack of sufficient water during low-water periods was a great drawback in the financing and promoting of this enterprise. He applied to the Army engineers and Gen. MacKenzie, who was Chief of Engineers, stating, as I have since been told by Maj. Keller, that he could finance the power plant provided he were given the right of storage of water during the night-hours, and asked permission from the Army engineers to entirely shut off the flow of water past the dam during the night hours in time of low water. As this would have entirely prevented navigation for many miles below the dam for many hours each night, his request was refused. He then modified his original request, again representing that with the right of storage during the night he could finance the project, and without it it would fall through.

As a matter of fact, he had practically spent this private fortune in the promoting of this project, and the Army engineers, I am told and believe, more through admiration for the pluck and energy of Mr. Cooper and in the belief that he could not put it through in any case, granted him the right in a signed agreement to store the water above the dam, as follows: Between the hours of sunset and sunrise, for the first hour the water flowing past the dam may be reduced to 15,000 cubic feet per second, for the second hour to 10,000 cubic feet per second, and during the remainder of the night until two hours before daybreak to only 5,000 cubic feet per second, provided that during the hours of daylight the same amount of water that had been stored at night should be released in addition to the normal flow.

This agreement has been kept practically secret every since. As far as I am aware, it has never been made public or published in this country. It has been unknown to the members of the Rivers and Harbors Committee, I believe, as well as to the Upper Mississippi River Improvement Association and to all those interested in the navigation of the Mississippi River. The effect of this storage is very apparent when you consider that in times of lowest natural flow there is 21,000 cubic feet of water in the river at this point. At such times it is very difficult for the ordinary river boats to navigate on account of the shallowness of the river, and in fact many of the larger boats have to tie up during these low-water periods. Now, when the water power company every night at will shuts off the flow of water past the dam for six or more hours at least to less than one-fourth the extreme natural flow, the effect will only be the entire suspension of navigation during those hours of the night; furthermore, when the first flow of water is turned on in the morning this will not catch up with the low-water stage preceding it for many miles below the dam and will be detrimental not only to local navigation but to all through river navigation from St. Louis to St. Paul. In fact, so monstrous and so appalling will be the effect of this storage if permitted that river men, officials of the Upper Mississippi River Improvement Association, and others interested could not at first believe that such an agreement could exist, and in fact if it had not been by accident, the knowledge of this storage agreement would not yet be known by them.

I first discovered the terms of this agreement when they were published in the London Times about two years ago, when the power company floated \$15,000,000 of bonds in London. It was necessary, in order to secure this bond issue, that this agreement with the Army engineers should be known to the foreign investors. When I spoke of this to different men interested in the internal waterways of this country,

they refused to believe that such an agreement existed. A few weeks ago I went to Maj. Kellar's office, in charge of the Army engineers at Rock Island, Ill., and there saw some of the original drafts of this agreement, which were corroborated by Maj. Kellar. When I asked him why this had been kept secret from the public and those interested in river navigation, he replied, as I remember it, that the engineers had made no mention of it on the outside for the reason that they had not heretofore been asked about it, but that they had no right to keep such an agreement secret; however, he could realize that the power company had not made this agreement public, because of the opposition it would create. I mention this fact merely as an incident illustrating the influence the power company has exerted over the Army engineers in other matters besides this bridge matter, which influence is decidedly detrimental to the public welfare. That there will be a protest against this right of storage from the steamboat men, the different towns along the Mississippi River, and from the Upper Mississippi River Improvement Association when they fully comprehend what it means, there can be no doubt. I realize that in making these assertions I am condemning the attitude of the Army engineers, but I can not help but feel that their attitude deserves and demands condemnation.

Mr. BOOHER. Is there anything in the law that authorizes the engineers of the United States Army to make that kind of an agreement?

Mr. RAINEY. I think they can, under this act.

Mr. BOOHER. Who were the engineers who signed this agreement and kept it quiet? Was Maj. Kellar one of them?

Mr. RAINEY. He does not say it was kept quiet, but it was not made public.

Mr. BOOHER. That is keeping it quiet.

Mr. RAINEY. Of course, anybody could have gone to Maj. Kellar's office and obtained that information.

Mr. STRECKFUS. Maj. Kellar had nothing whatsoever to do with it.

Mr. RAINEY. There was no attempt on the part of the engineers to keep it secret, but neither did they make it public.

Mr. KENNEDY. In this same hearing, from which Mr. Rainey has quoted a statement of Mr. Marsh, there is a statement by Col. Taylor, and I ask that his statement also go into the record.

Mr. SMALL. Without objection, the statement of Col. Taylor will also go in the record.

(The statement referred to is as follows:)

Mr. MARSH. There is an agreement, signed by the engineers of the Army, which has been kept secret from the light of day, whereby each night between sunset and sunrise the Mississippi River Power Co. shall have the right to store water at the rate of 15,000 for the first hour, 10,000 the second hour, and 5,000 per hour the remainder of the time until before daybreak, and in the day let loose the surplus that they have laid up over night, which amounts to 21,000 cubic feet per second.

Under this secret agreement, kept secret in this country, but which was published in England, every night that power company has the right to store away above the dam less than one-fourth of the extreme minimum flow of 5,000 cubic feet per second. Whenever this is done, not only during navigation but during night hours and when the water is turned on in the morning, that water will flow down the river. That is as monstrous a proposition as anything that has ever been permitted to any private corporation in the control of navigation of any of our big waters.

Col. TAYLOR. Mr. Marsh implies that that is a secret agreement. I would like to deny it absolutely.

Mr. STEVENS. You do not need to deny it.

Col. TAYLOR. It is an absolute misstatement, to put it mildly, that there is any secret agreement between the Engineer Department and the Mississippi River Power Co. anywhere. If there is any agreement, it had the approval of the Secretary of War.

The CHAIRMAN. A good solution of the matter would be for you to get a transcript of that.

Col. TAYLOR. Yes, sir. Everything which was granted to the Mississippi Power Co. is in the permit, which was duly approved by the Secretary of War under authority of Congress. It is all in the permit.

Mr. HUMPHREY. Let us try to get this matter cleared up a little bit, because it is rather important. As I understand the statement made by you, Mr. Rainey, it is that the agreement was an agreement by the Army engineers permitting the impounding of the water?

Mr. RAINEY. That can not be denied.

Mr. HUMPHREY. That agreement, if not a secret agreement, at least there was nothing said about it?

Mr. RAINEY. No.

Mr. HUMPHREY. I can not understand how the Army engineers would permit that, unless the authority was conferred upon them by the act, and if that is true it could not have been secret.

Mr. RAINEY. Of course, the act——

Mr. HUMPHREY (interposing). If the Government engineers make an arrangement of that kind, unless some express authority is given them, it would be contrary to law, but if the express authority is given them by the act it is not a secret agreement.

Mr. RAINEY. I will read you the authority as contained in the act. You will find it in section 2, which reads as follows:

That the withdrawal of water from the Mississippi River and the discharge of water into the said river, for the purpose of operating the said power stations and appurtenant works, shall be under the direction and control of the Secretary of War and shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels, or by rafts or barges: *Provided*, That the said company shall construct such suitable fishways as may be required from time to time by the Secretary of Commerce and Labor.

That is the authority.

Mr. HUMPHREY. That is an express prohibition of doing the very thing you complain of. If the engineers have done what you claim, they have violated the terms of that very act.

Mr. RAINEY. That is what we want to show to-day, that the impounding of the water does obstruct the river.

Mr. BOOHER. During the progress of the work of construction of that dam, did the Government engineers make reports to Congress?

Mr. RAINEY. Not to Congress. The Government engineers do their work under the direction of the War Department, and make their reports to the Chief of Engineers of the United States Army, to show that the work of construction has been done in accordance with the terms of the act.

Mr. BOOHER. No reports were made to Congress by the engineers?

Mr. RAINEY. Not at all; but I have no doubt they made reports to the Chief of Engineers of the Army.

Mr. BOOHER. And the Chief of Engineers of the Army, so far as you know, has never let this committee know that the Army engineers permitted that?

Mr. RAINEY. This committee is learning about it now for the first time. Anybody could have gone to the Engineer's office and have obtained this information, but nobody was led to think that such a thing as that was going to happen. Of course, the power company did not make it public in this country, because the opposition that might have developed might also have interfered with the financing of this proposition.

Mr. TREADWAY. That section of the law which you read does not show the nature of the navigation on the river, or the depth or draft of the boats navigating the river.

Mr. RAINEY. Not at all.

Mr. TREADWAY. What is the phraseology in that section? Does it provide that it shall not interfere with satisfactory navigation?

Mr. RAINEY. It says—

shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels, or by rafts or barges.

Mr. TREADWAY. Of course, there might be a little yacht there, as far as that description is concerned.

Mr. RAINEY. It says "steamboats or other vessels"—that there shall not be any interference with safe or convenient navigation on the river.

Mr. FREAR. In regard to that, the Chief of Engineers stated recently to the committee that the stage of water below Rock Island was always good so that there was freedom of navigation, but I called his attention to the fact that the boat I was on had been held up for 17 hours below Keokuk by reason of the impounding of the water. He said that was because there was a poor pilot on the boat, as I remember it.

Mr. RAINEY. Some two or three years ago I addressed a letter to everybody interested in the navigation of the upper Mississippi River and asked if any new boats were going to be built on account of this dam being there, and some of the people advised me that some boats had been withdrawn, and since the building of this dam there has not been a single new boat put on the river. Prior to the building of this dam the upper Mississippi River was being navigated by identically the same boats that now navigate the river. Those boats were navigated on that part of the river in perfect safety between Keokuk and Alton at the time Congress granted this authority.

I am not making any charges against the Army engineers, but the engineers seem to me to be favoring on that river the development of power rather than the safe and convenient navigation of the river below the dam. If we succeed in showing to-day that the steamboats that navigated the river at the time of and before the building of this dam are still navigating it, that those same boats are held up from 15 to 16 hours on account of the waves of water that come down the river from the Keokuk Dam, then the dam is being so operated under the permission of the Army engineers, that it does not, because of the impounding of the water above the dam, permit the safe and convenient navigation of the river by vessels below the dam.

That is the point exactly. The question is whether Congress, in the interests of navigation, is going to spend millions and millions, and millions of dollars on that river and let the Government engineers destroy the navigation of the river.

Mr. HUMPHREY. The only question here is whether or not that is being done.

Mr. RAINEY. Yes. We will now proceed with the proof, and I will ask the committee to hear Mr. H. C. Mead, of St. Louis, Mo.

Before Mr. Mead makes his statement, I would like to have permission to put in the record a statement made by the Army engineers as to the flow of water.

Mr. SMALL. Without objection, that may be inserted in the record.

(The statement referred to is as follows:)

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, June 1, 1914.

HON. HENRY T. RAINEY,
United States House of Representatives.

Sir: 1. Replying to your letter of May 19, 1914, regarding the flow of the Mississippi River at Keokuk, Iowa, I have the honor to state that the minimum flow of the Mississippi River at Keokuk has been accurately ascertained by numerous discharge observations with meters and floats at zero and other very low stages; the high-water discharge is estimated by comparison with observed flow at Rock Island at high water of 1880, and the figure given was used by the water-power company in designing its dam to accommodate it. The average annual flow is estimated for a stage of 4.9 feet, which was the average stage for the years 1910-1913, inclusive.

	Second-feet.
2. Minimum flow, accurate.....	20,000
Average flow, approximate.....	55,000
Maximum flow, approximate.....	260,000

3. No discharge observations have ever been made at Keokuk, except at low stages.
Very respectfully,

DAN C. KINGMAN,
Chief of Engineers, United States Army.

STATEMENT OF MR. H. C. MEAD, OF ST. LOUIS, MO., REPRESENTING THE STRECKFUS STEAMBOAT LINE.

Mr. SMALL. What is your position, Mr. Mead?

Mr. MEAD. I am counsel for the Streckfus Steamboat Line of St. Louis, Mo.

Mr. Chairman and gentlemen, we are appearing before you, by invitation, in reference to House resolution 468, as to the impounding of water and its effect on navigation by the Keokuk Dam.

The Congress of the United States passed Public act No. 65, which was approved on the 9th day of February, 1905, granting to the Keokuk & Hamilton Water Power Co., now absorbed by the Mississippi River Power Co., certain rights to construct a dam, etc., across the Mississippi River. This dam, known as the Keokuk Dam, reaches from Keokuk, Iowa, to Hamilton, Ill., clear across the Mississippi River.

We desire to call your special attention first to section 2 of that act, which reads as follows:

That the withdrawal of water from the Mississippi River and the discharge of water into the said river, for the purpose of operating the said power stations and appurtenant works, shall be under the direction and control of the Secretary of War, and shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels or by rafts or barges: *Provided*, That the said company shall construct such suitable fishways as may be required from time to time by the Secretary of Commerce and Labor.

Our contention in the premises is that during the year 1916, from May 1 to October 15, the Streckfus Steamboat Line was engaged in the operating of a line of steamboats running from St. Louis, Mo., to St. Paul, Minn., and intermediate points; from St. Louis, Mo., to Burlington, Iowa, and intermediate points; and from St. Louis, Mo., to Quincy, Ill., and intermediate points, taking both freight and passengers, and we used our boats for carriage and transportation, for the carriage of freight and passengers for hire, and used the Mississippi River "from and to," and between the above-mentioned points,

as a public highway or stream or public watercourse, to navigate our boats and transport our freight and passengers.

Our contention is, further, that from July 30 to August 22, 1916, there was a gradual storage of water in the lake above the dam, raising the level of the lake 1 foot during the period mentioned.

Mr. HUMPHREY. When you refer to the lake, what do you mean?

Mr. MEAD. That is above the dam.

Mr. HUMPHREY. The backwater is what you call the lake?

Mr. MEAD. Yes, sir.

Mr. TREADWAY. Designated as Lake Cooper.

Mr. MEAD. Yes, sir. We contend that at the same time the natural or regular flow of water of the Mississippi River, above the said lake, was diminishing and falling fast. In connection with that we refer to the Keithsburg records.

Mr. TREADWAY. How far up does this lake extend?

Mr. MEAD. It goes back between 40 and 60 miles, up past Burlington.

Mr. TREADWAY. The end of the lake is between Burlington and Muscatine?

Mr. MEAD. It is above Burlington and goes down to the dam, and the river is from 1 to 3 miles wide, I believe.

By so withholding the said water back and not letting the regular amount flow through that came into the lake at this time, it causes the river below to fall greatly, giving us a less stage of water between Keokuk, Iowa, and Alton, Ill., by at least 6 inches under what would have been had the regular flow been allowed to pass, and not have been held back.

In addition to the above, there is below the dam, and has always been, a daily fluctuation of water, caused by the manipulation of the dam by the Mississippi River Power Co., in some instances, between July 10 and September 15, 1916. Between those dates there has been a rise and fall of the water of from 18 to 20 inches in 24 hours; in fact, in some instances there has been a direct fluctuation of a foot and over within a few hours, and this fluctuation extends clear to Alton, in waves which do not meet, but diminish as they go.

Referring back now to the impounding of the 1 foot in the paragraph mentioned, which gave us the 6-inch lower stage than natural, this, together with the daily fluctuations of from 12 to 18 inches, would lower the river below the dam from 18 to 24 inches in many instances.

At this period of the year the regular flow of water of the Mississippi River was at its lowest ebb, and this particular period is when the steamboats need the water the most below the dam in order to navigate. But instead the Mississippi River Power Co. did not as much as let the regular river flow through, as is shown by their storage. In addition, the power company so manipulated the dam as to cause greater fluctuations daily on account of letting the water through the dam at irregular intervals. This is what has caused us all our trouble and our damage.

Mr. KENNEDY. Do you have any trouble above the dam in navigating?

Mr. MEAD. None at all. I am coming to that in a moment.

In the regular channel of the river, during the months of July, August, and September, when the average depth of water ranges

from 4½ to 5 feet, and sometimes less, we can operate our steamers on the river fairly well, but when this natural flow of water has been held back at the dam, and fluctuates to the extent of a foot, as has been the case at these irregular intervals, it gives us a stage of water in the channel, in waves, as low as 3½ feet to 4½ feet, which causes our boats to ground.

Mr. SMALL. Your present statement has reference to the river below the dam?

Mr. MEAD. From Keokuk to Alton, Ill.

Mr. SMALL. What is that distance?

Mr. MEAD. About 200 miles. That is a link between St. Louis and St. Paul, that the steamers ply; that is the link without plying—they could not go through to St. Paul.

Mr. TREADWAY. How long has this company which you represent been in operation?

Mr. MEAD. The present company has been in existence about six years, and for 25 years prior to that, the Diamond Joe Line, which this company absorbed, was in existence.

Mr. TREADWAY. How many vessels has your line?

Mr. MEAD. We ply five.

Mr. KENNEDY. You have five boats plying between St. Paul and St. Louis?

Mr. MEAD. We have three through boats, and we have a big excursion steamer.

Mr. KENNEDY. How long is the season during which you operate between St. Paul and St. Louis?

Mr. MEAD. I have practically covered that in my statement.

Mr. STRECKFUS. We operate in the short trade from St. Louis to Keokuk and Burlington, Iowa, about six months in the year, and from St. Louis to St. Paul, we start about the 1st of June and run until about the middle of September.

Mr. KENNEDY. So your through business runs about three and one-half months during the year?

Mr. STRECKFUS. About three and one-half months for the through business.

Mr. HUMPHREY. What is the tonnage of the vessels you operate?

Mr. MEAD. If you will permit, Capt. Streckfus will make a statement to the committee after I have concluded, and he is familiar with all those details, and if there is no objection, I would prefer to have him answer questions of that kind in reference to details.

Mr. HUMPHREY. I have no objection to that. You may proceed and complete your statement.

Mr. MEAD. I do not want you to misunderstand me, gentlemen. I have no desire to avoid answering these questions, but Capt. Streckfus will appear before this committee as soon as I conclude, and he is more familiar with those details than I am.

Mr. HUMPHREY. I would just as soon ask him those questions when he comes before the committee.

Mr. MEAD. I was saying, in the regular channel of the river, during the months of July, August, and September, when the average depth of water ranged from 4½ to 5 feet and sometimes less, we can operate our steamers in the river fairly well, but when this natural flow of water has been held back at the dam and fluctuates to the extent of a foot, as has been the case at these irregular intervals, it gives us a stage of water in the channel in waves as low as from 3½ to 4½ feet.

which causes our steamers to ground. For instance, say our steamer draws 4 feet, and at a crossing there was a depth of 4 feet 2 inches or 4 feet 3 inches. We could get over, and by adding 1 foot, or the crest of the wave to this 4 feet 3 inches, that does not materially help us over; but, on the contrary, take off 3 inches or 4 inches or a foot, or the trough of the wave, we could not move, and that has been the case many times.

Mr. TREADWAY. Is 4 feet the normal draft of your vessels?

Mr. MEAD. The affidavits we have show that our normal draft—

Mr. STRECKFUS. We have two boats that will draw 4 feet with certain loads on them.

Mr. MEAD. We have to limit our loads; we can not carry capacity loads all the time; in fact, carry limited loads most of the time. We have to refuse freight many times.

Mr. HUMPHREY. You have trouble at other places when the boats are heavily loaded?

Mr. STRECKFUS. We have all the way from Alton to Keokuk, up to Clarksville, between Clarksville and Louisiana, between Louisiana and Hannibal, and between Quincy and Keokuk, and that is hauled south of Keokuk, and between Keokuk and Alton, a distance of about 200 miles, with limited loads.

Mr. HUMPHREY. Would you have any difficulty if the boats were fully loaded, at other places above the dam?

Mr. MEAD. I do not think we would have much trouble. We are not having so much trouble.

Mr. BOOHER. Is all the trouble you speak of caused by the unlawful use of the water?

Mr. MEAD. By the manipulation of the dam. The water comes down in waves, and the waves do not meet.

Mr. BOOHER. Will you permit me to read a sentence from this book I have before me?

Mr. KENNEDY. That is a book gotten up by the Keokuk industrial concerns?

Mr. BOOHER. Gotten up by the city of Keokuk to get the Government to locate the dam there. Is this statement correct, in this book? In speaking of the advantages, from their point of view, they say:

One of the striking advantages which favors this site as regards manufacturing, is the fact of its location on the Mississippi River, one of the great water thoroughfares across the United States, and there is at present transportation for the largest river steamers from the Gulf to St. Paul for nine months of the year.

Is that a fact?

Mr. MEAD. No, sir; that is not a fact.

Mr. KENNEDY. Was not the season of three and one-half months caused by the fact that the people travel when the weather is hot, and does that not show that that is the reason for that being the season?

Mr. MEAD. We have to take the boats off because we can not run them longer than that time mentioned—

Mr. KENNEDY. Was not this a successful season?

Mr. MEAD. We had to take one of the boats off before the end of the season because she kept going aground.

Mr. KENNEDY. How did this season compare with other seasons, so far as the return on the investment is concerned?

Mr. MEAD. We had a fairly good season, but that would not have anything to do with it.

Mr. KENNEDY. Have you taken the matter up with Maj. Hoffman?

Mr. MEAD. We have.

Mr. KENNEDY. What does he say?

Mr. MEAD. He has written some letters.

Mr. KENNEDY. To whom?

Mr. MEAD. To the Engineer Department of the Army at Washington, and then written back to us telling us he will look into it. We have those letters, and copies of everything, showing what has been done. We have kept the copies.

Mr. TAYLOR. If the sentence which Mr. Booher read awhile ago speaks the truth, would you be here before this committee to-day?

Mr. MEAD. We would not be talking so loud, no, sir. If you go into that subject, I think there are a good many stockholders in that city—and I do not mean to cast any insinuations on anybody, but so far as the Keokuk people are concerned, of course, the dam has done a great deal for the city of Keokuk. It has made the city. They have spent millions of dollars around there, and they have helped the city. I think they have generously gone into various affairs. They have helped build a brand new hotel there. I do not know whether it is a fact, but I understand they are indirectly interested in that.

Mr. FREAR. Has that hotel helped navigation?

Mr. MEAD. It has nothing to do with navigation.

Mr. HUMPHREY. It might be that the fact that Keokuk was growing and had been prosperous might have something to do with navigation, as far as the prosperity of that company is concerned.

Mr. MEAD. I think prosperous times help everybody.

Mr. KENNEDY. How many boat lines operate between St. Paul and St. Louis?

Mr. MEAD. One. The Streckfus Steamboat Line.

Mr. KENNEDY. How many operate between St. Louis and Keokuk?

Mr. MEAD. One.

Mr. KENNEDY. In fact, yours is the line?

Mr. MEAD. We are the line; yes, sir. There is a great deal of freight that is carried from St. Louis past Alton into Calhoun County, and there is not a railroad in that county, and the freight is carried up to Clarksville and Hannibal, and over to Quincy, Ill., to La Grange, and Canton, and up to Keokuk.

Mr. KENNEDY. I saw a statement in the press last fall to the effect that the Streckfus Line would not stop for freight on Mississippi River where they did not have modern terminals.

Mr. MEAD. That proposition was misconstrued by some reporter, and we have had that brought to our attention more than once. We simply told the people we would like very much to have them furnish us terminals at which to stop if they wanted us to stop there. It was not so much the terminals we were going after. We wanted the stop, we wanted to get in, a landing place.

Mr. KENNEDY. The statement in the press said that you wanted modern terminals.

Mr. MEAD. Oh, no. There are none of those towns along the river which has money enough to build a shanty at the landings, but they want to take advantage of our service and take advantage of what we pay them in freight.

Mr. KENNEDY. I think this applied more particularly to the upper river, because it mentioned Dubuque.

Mr. MEAD. The newspapers say a lot of things. We did not say that.

Mr. FREAR. When the Government is putting all this money in here it is putting it in irrespective of the Streckfus Co.; the question is whether or not navigation is interfered with. That is the only issue.

Mr. MEAD. Mr. Kennedy spoke about the freight lines and the freight rates from St. Louis to St. Paul. We saved the St. Paul merchants, in comparison with what they would have had to pay over the same distance inland, over 225 per cent, and this particular table was gotten out by the St. Louis Chamber of Commerce.

Mr. FREAR. How much was that?

Mr. MEAD. Two hundred and twenty-five per cent, as against the rates for the same distance inland. For instance, Oklahoma City is 543 miles inland, and the rate out of Oklahoma City is 63 cents, and the Streckfus Line does not run there. We run from St. Louis to St. Paul, which is a distance of 573 miles by rail and 729 miles by water; the rate by rail is 21 per cent. That is the rail rate from St. Louis to St. Paul, 21 per cent, and that makes a difference of 200 per cent there, and we carry it for 25 per cent cheaper. We save the people an enormous amount of money everywhere we carry freight and places we stop.

Mr. FREAR. Can you not put that statement in the record?

Mr. MEAD. I will do so.

(The statement referred to is as follows:)

Streckfus Steamboat Line, St. Louis, Mo.—St. Louis-St. Paul service.

Below is given a rail versus rail comparison. Streckfus Line (water route) savings are 20 to 40 per cent greater than those shown herein.

From St. Louis, Mo.—	Miles.	1	2	3	4	5
To St. Paul, Minn.....	573	68	52.5	42	26	21
Do.....	729	40	35	32	21	18
To Oklahoma City, Okla.....	543	130	109	97	82	68
Difference in favor of St. Paul.....		67	56.5	55	56	42
Rates to Oklahoma City are greater than the St. Louis-St. Paul rail rates by.....		106	108	131	215	200
To La Crosse, Wis.....	440	50	42	33	23	18
Do.....	573	38	32	27	19	15.5
To Vinita, Okla.....	437	101	83	78	55	43
Difference in favor of La Crosse, Wis.....		51	41	40	32	25
Rates to Vinita, Okla., are greater than the St. Louis-La Crosse rail rates by.....		102	97.6	121	139	139
To Dubuque, Iowa.....	346	48.2	30.5	31.2	24.2	18.9
Do.....	439	36	32.5	25	19	15
To Topeka, Kans.....	347	80	62	49	38	28
Difference in favor of Dubuque, Iowa.....		31.8	22.5	17.8	13.8	9.1
Rates to Topeka, Kans., are greater than the St. Louis-Dubuque rail rates by.....		65.9	57	57	57	48.1
To Quincy, Ill.....	137	30.8	29.4	23.1	16.3	13.1
Do.....	161	28	24	19	14	11.5
To Clark, Mo.....	137	48	36	27	21	16
Difference in favor of Quincy, Ill.....		11.2	6.6	3.9	4.7	2.9
Rates to Clark, Mo., are greater than the St. Louis-Quincy rail rates by.....		30	22	16	29	22
To Hannibal, Mo.....	120	34.7	28.4	22.1	16.3	12.6
Do.....	141	20.5	23	18	13.5	10.5
To Mexico, Mo.....	110	43	34.5	26	21	16
Difference in favor of Hannibal, Mo.....		8.3	6.1	3.9	4.7	3.4
Rates to Mexico, Mo., are greater than the St. Louis-Hannibal rail rates by.....		24	21.5	17.6	39	27
To Cape Girardeau.....	131	34	27	21	17	13
Do.....	150	28	24	18	15	12.5
To Salem, Mo.....	127	46	39	32	28	23
Difference in favor of Cape Girardeau, Mo.....		12	12	11	11	10
Rates to Salem, Mo., are greater than the St. Louis-Cape Girardeau rail rates by.....		35.3	44.4	52.4	64.7	77

Mr. FREAR. Do you understand that that is one of the purposes of navigation, to bring the rail rates down?

Mr. MEAD. It is to aid the towns along the river.

Mr. KETTNER. I understood you to make the statement that there was only one line running on the Mississippi River?

Mr. MEAD. No, sir; I was asked about the line running from point to point, and I answered that question.

Mr. KETTNER. You mean from St. Louis to St. Paul?

Mr. MEAD. Yes, sir. The Streckfus Steamer Line is the only direct steamer line, the one line running between St. Louis and St. Paul.

Mr. KETTNER. That was formerly known as the Diamond Joe Line?

Mr. MEAD. Yes, sir.

Mr. KETTNER. What has become of the American Line?

Mr. MEAD. I do not know that line. We absorbed the Diamond Joe Line of steamers.

Mr. KETTNER. I was referring to the American Line which used to run to St. Paul. There was the Diamond Joe Line and the American Line.

Mr. STRECKFUS. I do not know the American Line.

Mr. TREADWAY. Did the Streckfus Line commence operations below the dam after the construction of the dam? You were explaining about the condition of the water from St. Louis to Alton and Keokuk, and if I understand you, it is the contention—

Mr. SMALL (interposing). Between Alton and Keokuk.

Mr. TREADWAY. From Alton to Keokuk. Did this Streckfus Company go into the steamship business along the river after the construction of the dam?

Mr. MEAD. These boats of the Streckfus company are the identical boats, the boats now running are the identical boats that have been running and were running before the dam was constructed, and they navigated the river, and we did not have the trouble we have now.

Mr. TREADWAY. You did not have the trouble you are now experiencing?

Mr. MEAD. We have affidavits here which we will read to the committee showing that we are now having trouble that we never had before the dam was built.

Mr. RAINEY. There are a number of boats navigating this part of the river, between Alton and St. Louis and Keokuk, making Calhoun County points.

Mr. MEAD. There are a lot of little steamers running between small places, and those steamers are not half the size of the steamers we have. The Eagle Packet Co. has a line of boats running over to Alton and up the Illinois River, and some run above Alton, into Calhoun County, and there are also a couple of small boats that go into Calhoun County. There are some of the Eagle Packet Co. boats that go up in there, and as soon as the Eagle Packet Co. boats got passed Alton on the Mississippi they grounded, same as we did.

Mr. RAINEY. Is Captain Leyhle in charge of one of those boats?

Mr. MEAD. Yes, sir. He is manager of the company.

Mr. RAINEY. He signs a protest saying that often those boats are interfered with.

Mr. MEAD. Yes, sir.

Mr. KENNEDY. How far below Keokuk is the mouth of the Illinois River?

Mr. MEAD. The distance between Keokuk and Alton is about 200 miles, and the Illinois River comes in about there.

Mr. KENNEDY. His boat runs to Alton?

Mr. MEAD. Some of his boats go north of Alton into Calhoun County at certain seasons of the year.

Mr. KENNEDY. The boats that go past the dam are Blair's boats?

Mr. MEAD. He has a couple of small boats, one running from Quincy to Keokuk, and one running from Keokuk to Burlington.

Mr. RAINEY. I want to say, in this connection, that that is my congressional district on one side of the river from a point just above St. Louis, just above Alton, north to Quincy. It is Speaker Clark's district on the other side of the river, and the landings in those two districts are made by large steamers running out of St. Louis, going as far north as Keokuk, and beyond, and every one of the captains and pilots of those steamers have signed a protest against the impounding of this water, saying it interferes with their navigating all the way to Keokuk, and Mr. Clark, who is familiar with the navigation on the river, can make the same statement I am making.

Mr. KENNEDY. How many boat companies are represented by the signatures on that petition?

Mr. MEAD. All of the steamboat companies that run there.

Mr. KENNEDY. You mean north?

Mr. MEAD. Yes; you wanted to know the individual lines?

Mr. KENNEDY. Yes.

Mr. MEAD. On that petition are represented the Streckfus Line, the Belle of Calhoun Line, the Eagle Packing Co. Line, and the Tennessee River Line.

Mr. KENNEDY. Where does it run?

Mr. MEAD. Going up in Calhoun County, up the Illinois River. Then there is the Tennessee River Line. That is four.

Mr. KENNEDY. How does the Tennessee River Line come in there?

Mr. MEAD. They go up into Calhoun County at certain times of the year, and their boat got stuck up there in Calhoun County.

Mr. BOOHER. How long has this dam been so used that it has obstructed navigation?

Mr. MEAD. For some years past. We had never gone at the matter properly. We have always talked, and never gotten the data written and together. This year we tried to hunt up the data and get it down in black and white. Heretofore we have been doing a lot of talking, and it has been hard to bring the data together when needed. This has been going on for several years—for three or four years.

Mr. BOOHER. Has it been as bad for three years, or was it as bad three years ago as it was in 1916?

Mr. MEAD. It has not been as bad heretofore as it was this past year.

Mr. KENNEDY. When did you first protest to Maj. Hoffman?

Mr. MEAD. The letter would show. We have it here. I think it was back in July.

Mr. SMALL. Do you wish to put those letters in the record?

Mr. MEAD. Capt. Streckfus is going to testify before this committee, and the gentlemen on this committee can take that matter up with him, if they desire to have those letters in the record. They

will be here and you can have them for the record if you desire them. We wrote a letter to Maj. Hoffman and he answered, and the letter was referred to some other department.

Mr. SMALL. You may proceed with your statement, Mr. Mead.

Mr. MEAD. As I was saying, for instance, say our steamers draw 4 feet, and at a crossing there was a depth of 4 feet 2 inches, or 4 feet 3 inches. We could get over, but the addition of 1 foot, or the crest of the wave, to this 4 feet 3 inches does not materially help us over, but on the contrary take off 3 or 4 inches, or a foot, or the trough of the wave, and we could not move, and that has been the case many times. It was the case with the steamer *Quincy* on August 22, 24, and 31, September 3 and 10; with the steamer *St. Paul* on July 20, August 9, 19, and 29, and with the steamer *Dubuque* on August 24 and September 4. Some of the groundings I have just cited were as long as 24 hours, with over 200 passengers aboard, and also a lot of perishable freight.

Under these conditions our steamers can not be run except at a loss, and our steamers experience no trouble from Keokuk north, 400 miles to St. Paul.

Mr. KENNEDY. Did you have any trouble in grounding before the dam was built?

Mr. MEAD. No, sir; I do not think we had but very little trouble.

Mr. KENNEDY. Is it not true that before the dam was built you had trouble on account of low water?

Mr. MEAD. I do not know much about that. We had very little trouble. Capt. Streckfus can answer that question better than I.

Furthermore, these irregular waves or rises and falls, do not even up; in fact, they cause and permit sedimentation in the channel, particularly at the crossings, caused by the low, slow water in the troughs; in fact the stuff does not cut out, but on the contrary settles and fills up. Then, when the crest of the wave at the next irregular period comes it overflows these artificial improvements, and the water does not run through the regular course or channel, as usual. It does not cut a channel such as the even, natural, regular flow of the river would.

We carry upon each of our steamers a captain and two regular licensed pilots, all of whom are considered among the best.

I propose showing to you gentlemen of the committee, by Capt. Joseph Streckfus, of St. Louis, who is here with me from St. Louis representing the Streckfus Steamboat Line, and also the Steamboat Owners' Association, of St. Louis, who own and control all the steamer lines there, the following:

First. The true conditions of the river, as Capt. Streckfus has seen them, he being vitally interested therein. We propose to show by Capt. Streckfus that there has been an actual impounding of the water, and that there has been a material fluctuation in the river below the dam.

Second. By the maps, plats reports, gage readings, newspaper clippings, weather reports, and other data, we propose to reinforce our contention.

Third. By affidavits of captains operating the largest steamers upon the entire Mississippi River, we propose to further fortify our contention.

Fourth. By statements of fishermen, agents, and disinterested persons, we propose to further fortify our contention.

Fifth. We neither have had, nor could we get any aid from the power company or the United States Engineers' Office, although we requested aid. Yet they could and did aid the Mississippi River Commission in their last inspection trip south, to navigate the same section of the river referred to, by the United States engineers and the power company letting through $3\frac{1}{2}$ feet of water, on the night of November 10, so as to permit their steamer to move and navigate down the river to St. Louis, which they did, on this wave of extra water. If the Mississippi River Commission had to confront the same conditions we meet all the time, they and their steamer would be at Warsaw yet.

Mr. FREAR. What was the purpose of letting that $3\frac{1}{2}$ feet of water through? .

Mr. MEAD. Because they could not navigate without it.

Mr. FREAR. What boat was it on which they were traveling?

Mr. MEAD. It was a boat bringing the Mississippi River Commission south to investigate the Mississippi River. That boat was at Warsaw; reached Warsaw at 5 o'clock in the afternoon, leaving there the next morning, when the wave struck it, before breakfast, at 6 o'clock.

During the night Maj. Meigs, Maj. Hoffman, and the Power Co. let through $3\frac{1}{2}$ feet of water, as is shown by all the water gauges as far south as Alton.

Mr. FREAR. You say that is very unusual?

Mr. MEAD. It was extraordinary, in view of the fact that one of our steamers with 200 passengers on board was held up because we could not get 2 or 3 inches more of water.

Mr. TREADWAY. Do you know how much that boat draws?

Mr. STRECKFUS. It draws about $3\frac{1}{2}$ feet. The lowest water at that time was about 1 foot or a foot and a half higher than we had in August. Maj. Hoffman, the engineer in charge of the district at Rock Island, was aboard the boat, and Maj. Meigs, the division engineer, was also aboard with the pilot, and he said they could not cross the crossings below Warsaw, and Warsaw was the first one, and he said they had better let through 2 feet of water; but the other man said that would not be enough, and so the pilot went to bed. In the morning they had let through $3\frac{1}{2}$ feet of water, and there was a rise, and they went on down the river. The rise flattened out, and they went down the river to Alton, Ill., a distance of about 200 miles, on this high wave.

This impounding of water and irregular flow of the water has damaged us very much, and if it is permitted to continue this year as it went on last year and several years before, it will put an end to the navigation of this section of the river, below the dam, and will cause a waste and the loss of all the millions of dollars heretofore appropriated by Congress for the improvement of this section of the river.

We will have to cease business with our five steamers, which are valued at \$300,000, as the navigating of this river is a matter of life and death with us.

Mr. TAYLOR. Mr. Mead, do you personally know about the grounding of the boats that you have mentioned?

Mr. MEAD. Yes, sir. We know, because we have the information from the captains on those boats. Then, we have affidavits covering that from the captains who were on the boats. Then, too, we have the logs of the boats. We have it checked up. We have brought

the original logs to you, gentlemen. We have shown our hand. We come here to explain, not in a scientific way, perhaps, how that river is manipulated; but whether it is manipulated scientifically or not, we do come here to show you gentlemen just how that river is manipulated coming south to the dam, by the Mississippi River Power Co. We say that if they would allow the regular flow of water to pass and come down the Mississippi River at all times, we could navigate the river and navigate it in safety, most of the time. That is our contention. We can show you that the water is being raised above and lowered below in the lowest season, and at the same times.

Mr. KENNEDY. I noticed in one of the petitions filed in the record this claim about the lighthouse service on the river. I take it from that that you think the channel is not properly marked; is that true?

Mr. MEAD. Well, we have not that matter before us just now. We are going to try to keep before you gentlemen certain matters. There are gentlemen here, understand, who have different views as to the manipulation of that water at the dam. We are going to show to you gentlemen, if it is your wish, that this manipulation causing the water to rise in the pond, and not giving us the water below the dam, is hurting river navigation. That is what we propose to show, Mr. Kennedy. As to the petition with respect to the lighthouses, Mr. Kennedy, we have other petitions, too. I did not produce them.

Mr. KENNEDY. That petition would indicate, it seems to me, that the channel was not properly marked by lights.

Mr. MEAD. There are affidavits from the captains who say that they ground right in the channel; that they run through the same channel that was given them by the United States Engineer Department; and they say that they also had a skiff on the river trying to find a place to get around, and found they were in the channel, and deepest water there.

Mr. FREAR. This condition with respect to these lighthouses is something that occurs all along the river, above the dam, as well as below, is it not?

Mr. MEAD. Yes, sir; it goes all the way up to St. Paul.

Mr. SMALL. It is about time for the House to meet. These gentlemen have come quite a distance, and Mr. Rainey wishes the committee to hear several of them who have not yet spoken. Mr. Kennedy, as I understand it, also has some gentlemen here whom he wishes heard. In view of the circumstances, perhaps it would be well to have an adjourned meeting.

Mr. KENNEDY. Yes. There is a gentleman here from the power company I would like to have the committee hear. I certainly hope that you will find time to-day to grant a further hearing.

Mr. GALLAGHER. Before we adjourn, I would like to ask Mr. Mead, as a representative of this company here, what remedy he would suggest, knowing the conditions there as he does. What remedy do you suggest, Mr. Mead?

Mr. MEAD. One of my suggestions is this: Allow the regular flow of water that comes down the Mississippi River, into the pond or lake above the dam, to pass through that dam regularly as it comes to it at all times and we can get along all right. You have asked me rather quickly and I have only given you one suggestion. I will try to give others later, if I have the opportunity.

(Thereupon, at 12 o'clock, noon, the committee took a recess until 3 o'clock p. m.)

AFTER RECESS.

WEDNESDAY, FEBRUARY 14, 1917.

The hearing was resumed at 3 o'clock p. m.

Mr. SMALL. We are ready to proceed, gentlemen.

Mr. HUMPHREY. Mr. Chairman, before we begin the hearing I would like to make a suggestion. The time that we have to give to this is necessarily limited. It occurs to me it would be well to give a certain amount of time to those who are presenting the issues for the side which we have already heard to some extent, and then allot so much time to the other side. Then we will know when we are going to get through. Speaking for myself, I can not stay here over an hour.

Mr. SMALL. I would like to make a suggestion which I think, if we will confine ourselves to it, will shorten the whole matter. The inquiry here is as to the extent to which, if any, the operation of this dam, this water-power dam, at Keokuk has impaired the navigability of the Mississippi River. The impairment, if any, appears to be below the dam and between Keokuk and Alton. If we could confine the evidence to the question of the impairment of the navigability of the Mississippi River below the dam and avoid any extraneous matters, that would shorten the time.

I have the act before me. For the information of the committee, particularly, I shall read certain paragraphs. I shall read the two paragraphs which are the ones that concern us here.

There seems to be no question raised that the construction of the dam is in violation of the act.

The only question is whether, in the operation of the power and the control of the water, any impairment of navigation results. Now, on that, there is just this one paragraph, section 1:

Provided further, That the said dam and appurtenant works shall be so designed, located, constructed, maintained and operated, and that said lock and dry dock with their appurtenances shall be so designed, located, constructed and equipped as to permit at all times during the season of navigation and at any stage of water, the safe and convenient navigation of steamboats and other vessels, or rafts and barges, through the portion of the Mississippi River now occupied by the Des Moines Rapids, as well as through the entire length of the pool formed by the said dam.

That would seem to have reference to the part of the Mississippi River above the dam. The rapids are above the dam, so that has no application.

Mr. STRECKFUS. Doesn't it say the withdrawal of the water and the discharge?

Mr. SMALL. I am coming to another paragraph.

Then, there is section 2, which was read this morning:

Sec. 2. That the withdrawal of water from the Mississippi River and the discharge of water into the said river, for the purpose of operating the said power stations and appurtenant works, shall be under the direction and control of the Secretary of War and shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels, or by rafts or barges: *Provided,* That said company shall construct such suitable fishways as may be required from time to time by the Secretary of Commerce and Labor.

That seems to be the section that is applicable to this inquiry. I called the attention of the committee to the language, "that the withdrawal of the water and the discharge of said water for the purpose of operating power stations and appurtenant works shall be under the direction and control of the Secretary of War," so that

there seems to be no question of vested rights here, so far as operation is concerned. Whatever impairment of navigability has occurred by reason of the manner of operation, that is a reserved power under the control of the War Department, and, of course, at all times under the control of Congress.

Mr. SWITZER. Is not this a charge against the War Department? Have we given them notice of it?

Mr. SMALL. The War Department?

Mr. SWITZER. Yes. Is not this a charge of improperly operating dams?

Mr. SMALL. It may be contended that they are now operating it in accordance with the directions of the War Department. If so, it is up to the War Department, either with or without the direction of Congress, to change their plans of operation. If they are exceeding the plans and directions of the Secretary of War, why, then, the fault lies altogether with the power company.

Mr. HUMPHREY. It seems to me, Mr. Chairman, there is one question that might shorten this a great deal. I apprehend that finally this will resolve itself into the question of whether or not the company has been storing this water so that it has had the effect they have been talking about. So, it seems to me that it might possibly turn out that the fact that those boats stuck on the bar below, and had trouble navigating, may be immaterial. I think that should first be established, that that fact was caused by the operation of the dam. I imagine that it is a question of dispute. If this condition is not due to the dam, or the operation of it in any way, it becomes immaterial.

Mr. SMALL. And your point is?

Mr. HUMPHREY. That the thing to establish first is who is responsible for this condition that it is claimed exists.

Mr. FREAR. It has been shown here, as I understand it, that there is a proposed agreement that a certain amount of water shall be retained and permitted to go through at certain times. It has also been alleged, as I understand it, that 3½ feet of water was allowed to go through at one time. Now, there is testimony that certainly should be weighed, whether it is accurate or not. Here is a case where the Government has spent some \$27,000,000 on this river, and I think the question is of sufficient importance to make a complete inquiry. I think the gentlemen who have power interests ought to have all the time necessary to explain away, if they can, as I assume they expect to, some of these statements. It is an important question; it is a question of the navigability of this river; and I do not think we should shorten it up. I think that it is the duty of the committee, so far as we can, to hear all they have to say. It is a very important question.

Mr. SMALL. If there is no objection, we will proceed.

Mr. RAINEY. Mr. Chairman, in order to shorten the matter and get some data in the record, I want to offer in evidence, and ask that it be printed in the record, a statement made by Maj. Meigs, United States civil engineer, at Keokuk, Iowa, dated October 11, 1916. It shows the variations in conditions, and gives the gauge records at Keokuk, Iowa, from the 10th of July of that year through the months mentioned here, through the period of navigation. It is made for the purpose of showing the effect of the tides, the variations. I will call that Exhibit A.

Gauge records, Keokuk, Iowa.

RIVER GAUGE.

Date.	Midnight.	6 a. m.	Noon.	6 p. m.	Date.	Midnight.	6 a. m.	Noon.	6 p. m.
July 10	6.70	6.50	7.00	6.95	Aug. 13	4.60	5.40	6.10	5.15
11	6.60	7.00	7.35	7.10	14	4.65	4.55	4.60	5.15
12	6.95	6.90	7.15	7.00	15	4.80	4.80	4.60	4.90
13	7.00	7.00	7.25	7.25	16	4.40	4.10	4.50	4.65
14	7.15	7.30	7.30	7.45	17	4.20	4.10	3.85	3.90
15	7.80	7.45	7.40	7.45	18	3.65	3.95	3.90	4.15
16	7.50	7.50	7.80	7.55	19	3.75	3.70	3.75	3.25
17	7.50	7.60	7.65	7.85	20	3.50	3.80	3.85	3.45
18	7.60	7.85	7.65	7.75	21	3.45	3.35	3.10	2.65
19	7.70	7.85	7.85	7.80	22	3.25	3.65	3.80	4.00
20	7.60	7.80	7.90	7.75	23	3.60	3.55	3.50	3.85
21	7.55	7.60	7.80	7.95	24	3.00	2.65	3.05	3.20
22	7.60	7.65	7.85	7.65	25	3.00	3.30	3.10	3.35
23	7.60	7.65	8.00	7.85	26	2.90	3.00	2.95	3.00
24	7.80	7.60	8.00	7.75	27	2.85	2.90	3.00	2.90
25	7.55	7.45	7.90	7.55	28	2.75	2.75	2.75	2.70
26	7.10	7.10	7.60	7.45	29	2.60	2.70	2.50	2.75
27	7.10	7.00	7.35	6.70	30	2.70	2.75	2.90	2.75
28	6.75	6.85	7.05	6.85	31	2.65	2.60	2.55	2.75
29	6.75	6.85	6.90	6.55	Sept. 1	2.50	2.55	2.55	2.70
30	6.45	6.65	6.60	6.20	2	2.65	2.70	3.00	2.90
31	6.15	6.00	6.25	6.10	3	2.70	2.55	2.40	2.50
Aug. 1	6.10	6.00	6.10	6.00	4	2.45	2.60	2.50	2.55
2	5.95	5.70	5.85	6.15	5	2.80	2.65	3.05	2.75
3	5.90	5.50	6.00	6.05	6	3.00	3.75	3.85	3.80
4	5.60	5.30	5.65	5.50	7	3.90	3.70	4.15	4.30
5	5.30	5.20	5.55	5.10	8	5.00	4.20	3.85	4.20
6	4.85	4.55	5.05	5.10	9	3.60	3.00	3.25	3.35
7	5.45	5.85	5.65	5.20	10	3.05	3.10	3.40	3.15
8	4.85	5.00	5.15	5.00	11	3.15	3.25	3.55	3.60
9	4.70	4.60	4.60	4.65	12	3.65	3.55	3.70	3.90
10	4.45	4.80	4.50	4.10	13	3.90	3.90	4.10	4.05
11	5.20	5.25	5.30	5.10	14	3.30	3.05	3.50	3.60
12	4.50	4.90	5.15	4.80	15	3.50	3.50	3.75	3.55

Remarks: In addition to the readings taken four times a day from the river gauge, we attach a separate sheet giving hourly readings between Aug. 30 at 8 a. m. and Sept. 15 at 12 m. n.

POOL LEVEL.

July 10	523.26	523.40	523.45	523.50	Aug. 13	523.70	523.65	523.45	523.45
11	523.80	523.45	523.40	523.40	14	523.80	523.55	523.60	523.55
12	523.40	523.40	523.40	523.40	15	523.80	523.50	523.60	523.60
13	523.45	523.40	523.40	523.45	16	523.80	523.60	523.55	523.55
14	523.40	523.40	523.40	523.35	17	523.80	523.55	523.55	523.55
15	523.85	523.35	523.30	523.40	18	523.65	523.60	523.60	523.6
16	523.35	523.35	523.40	523.35	19	523.65	523.65	523.70	523.70
17	523.25	523.25	523.30	523.10	20	523.70	523.70	523.70	523.70
18	523.20	523.10	523.10	523.10	21	523.75	523.70	523.75	523.90
19	523.10	523.10	523.00	523.10	22	523.90	523.90	523.85	523.70
20	523.05	523.05	523.10	523.0	23	523.70	523.65	523.60	523.70
21	523.00	523.05	523.00	523.0	24	523.65	523.70	523.70	523.8
22	523.05	523.05	523.10	523.10	25	523.85	523.70	523.80	523.80
23	523.10	523.15	523.00	523.0	26	523.80	523.75	523.80	523.80
24	523.05	523.05	523.10	523.0	27	523.80	523.75	523.80	523.80
25	523.95	523.05	523.00	523.05	28	523.70	523.70	523.70	523.70
26	523.10	523.10	523.00	523.05	29	523.70	523.70	523.70	523.70
27	523.10	523.05	523.00	523.05	30	523.75	523.70	523.80	523.75
28	523.05	523.05	523.00	523.10	31	523.70	523.65	523.75	523.80
29	523.05	523.00	523.00	523.05	Sept. 1	523.75	523.75	523.80	523.80
30	523.10	523.05	523.00	523.20	2	523.80	523.70	523.80	523.75
31	523.15	523.20	523.30	523.25	3	523.70	523.70	523.65	523.70
Aug. 1	523.30	523.30	523.30	523.3	4	523.65	523.75	523.70	523.8
2	523.40	523.40	523.45	523.40	5	523.80	523.80	523.80	523.85
3	523.35	523.40	523.40	523.40	6	523.90	523.85	523.80	523.90
4	523.40	523.45	523.40	523.40	7	523.90	523.95	523.85	524.00
5	523.45	523.50	523.50	523.50	8	523.85	523.80	523.80	523.80
6	523.55	523.60	523.65	523.6	9	523.70	523.75	523.85	523.85
7	523.60	523.65	523.65	523.40	10	523.90	523.90	523.85	523.85
8	523.60	523.55	523.45	523.50	11	523.90	523.90	523.90	524.00
9	523.55	523.60	523.50	523.6	12	523.90	523.80	523.85	524.00
10	523.55	523.45	523.45	523.6	13	523.90	523.85	523.85	523.85
11	523.65	523.65	523.50	523.60	14	523.80	523.85	523.90	523.95
12	523.65	523.55	523.50	523.65	15	523.90	523.85	523.95	523.90

Hourly readings, Keokuk Lock, river gauge.

	Aug. 30.	Aug. 31.	Sept. 1.	Sept. 2.	Sept. 3.	Sept. 4.	Sept. 5.	Sept. 6.	Sept. 7.
1 a. m.		2.65	2.40	2.75	2.65	2.35	2.70	3.05	3.90
2 a. m.		2.60	2.40	2.75	2.65	2.40	2.70	3.35	3.80
3 a. m.		2.65	2.40	2.75	2.60	2.50	2.65	3.40	3.75
4 a. m.		2.65	2.50	2.70	2.60	2.60	2.65	3.50	3.75
5 a. m.		2.60	2.65	2.75	2.60	2.55	2.70	3.60	3.70
6 a. m.		2.60	2.55	2.70	2.55	2.60	2.65	3.75	3.70
7 a. m.		2.65	2.55	2.55	2.60	2.65	2.80	3.90	3.85
8 a. m.	2.85	2.55	2.45	2.85	2.65	2.60	2.85	4.00	4.05
9 a. m.	2.85	2.50	2.40	2.90	2.65	2.60	2.90	4.05	4.10
10 a. m.	2.80	2.55	2.40	2.90	2.50	2.45	2.95	4.00	4.10
11 a. m.	2.75	2.55	2.45	3.00	2.40	2.55	3.00	3.95	4.15
12 noon	2.80	2.55	2.55	3.00	2.40	2.60	3.05	3.85	4.15
1 p. m.	2.80	2.60	2.55	3.10	2.30	2.65	2.95	3.75	4.15
2 p. m.	2.85	2.55	2.55	3.05	2.30	2.80	2.95	3.75	4.20
3 p. m.	2.95	2.55	2.50	3.00	2.25	2.65	3.05	3.85	4.00
4 p. m.	2.85	2.55	2.50	3.00	2.35	2.60	2.85	3.95	4.10
5 p. m.	2.75	2.75	2.70	3.00	2.45	2.60	2.75	3.95	4.20
6 p. m.	2.75	2.75	2.70	2.90	2.50	2.55	2.75	3.80	4.30
7 p. m.	2.75	2.75	2.70	2.90	2.60	2.65	3.00	3.95	4.30
8 p. m.	2.90	2.70	2.70	2.95	2.70	2.90	3.05	4.00	4.60
9 p. m.	2.75	2.70	2.70	2.90	2.65	2.90	2.90	3.80	4.90
10 p. m.	2.75	2.75	2.70	2.90	2.70	2.75	2.95	3.85	5.00
11 p. m.	2.70	2.80	2.90	2.90	2.70	2.75	2.95	4.05	5.10
12 midnight	2.65	2.50	2.65	2.70	2.45	2.80	3.00	3.90	5.00

	Sept. 8.	Sept. 9.	Sept. 10.	Sept. 11.	Sept. 12.	Sept. 13.	Sept. 14.	Sept. 15.
1 a. m.	4.90	3.55	3.05	3.10	3.65	3.85	3.25	3.45
2 a. m.	4.80	3.20	3.05	3.05	3.50	3.90	3.15	3.45
3 a. m.	4.70	3.10	3.10	3.05	3.65	3.90	3.15	3.55
4 a. m.	4.60	3.05	3.10	3.20	3.55	3.90	3.15	3.55
5 a. m.	4.50	3.05	3.10	3.15	3.55	3.80	3.10	3.50
6 a. m.	4.20	3.00	3.10	3.25	3.55	3.90	3.05	3.50
7 a. m.	4.05	3.15	3.20	3.40	3.70	3.95	3.10	3.55
8 a. m.	4.05	3.15	3.25	3.40	3.75	4.10	3.25	3.70
9 a. m.	4.05	3.25	3.30	3.65	3.60	4.15	3.40	3.85
10 a. m.	4.00	3.35	3.35	3.65	3.50	4.10	3.45	3.75
11 a. m.	3.90	3.30	3.40	3.60	3.65	4.10	3.50	3.80
12 noon	3.85	3.25	3.40	3.55	3.70	4.10	3.50	3.75
1 p. m.	4.00	3.35	3.35	3.60	3.75	4.05	3.65	3.80
2 p. m.	4.20	3.25	3.35	3.65	3.75	4.15	3.75	3.85
3 p. m.	4.25	3.35	3.35	3.65	3.70	4.10	3.75	3.75
4 p. m.	4.30	3.35	3.30	3.70	3.80	4.10	3.70	3.65
5 p. m.	4.20	3.35	3.20	3.60	3.85	4.05	3.70	3.60
6 p. m.	4.20	3.35	3.15	3.60	3.90	4.05	3.60	3.55
7 p. m.	4.30	3.45	3.50	3.80	4.10	4.05	3.70	3.60
8 p. m.	4.20	3.40	3.40	3.80	3.95	3.90	3.50	3.50
9 p. m.	4.15	3.40	3.40	3.80	4.00	3.70	3.45	3.45
10 p. m.	4.00	3.30	3.40	3.70	3.90	3.50	3.45	3.40
11 p. m.	3.90	3.15	3.25	3.60	3.95	3.35	3.45	3.40
12 midnight	3.60	3.05	3.15	3.65	3.90	3.30	3.50	3.40

WAR DEPARTMENT,
UNITED STATES ENGINEER SUBOFFICE,
Keokuk, Iowa, October 11, 1916.

Capt. JOS. STRECKFUS,
Assistant General Manager Streckfus Steamboat Line, St. Louis, Mo.

DEAR SIR: Yours of the 10th received with 83 cents, making a total of \$1.83 received from you, which I have transmitted to the Rock Island office.

I now inclose you the records of the readings of the gauges here.

Yours, respectfully,

M. MEIGS.
United States Civil Engineer.

I wish also to offer an exhibit, which I shall call Exhibit B, the same being the log, showing the names of the members of the Mississippi River Commission who accompanied the steamer *Mississippi*, a United States boat, down the river.

EXHIBIT B—MISSISSIPPI RIVER COMMISSION.

[Created by act of Congress approved June 28, 1879.]

Col. C. McD. Townsend, Corps of Engineers, United States Army. Room 1322 International Life Building, St. Louis, Mo. (From Mar. 10, 1911.) President from February 6, 1912.

Homer P. Ritter, Assistant United States Coast and Geodetic Survey, Washington, D. C. (From Apr. 20, 1904.)

Col. James G. Warren, Corps of Engineers, United States Army. Room 540, Federal Building, Buffalo, N. Y. (From Aug. 14, 1906.)

Charles H. West, Civil Engineer, 206 South Walnut Street, Greenville, Miss. (From Feb. 5, 1910.)

Col. Lansing H. Beach, Corps of Engineers, United States Army. P. O. Box 716, Cincinnati, Ohio. (From June 5, 1913.)

Edward A. Glenn, Louisiana, Mo. (From Mar. 11, 1914.)

Maj. Clarke S. Smith, Corps of Engineers, United States Army, secretary from August 1, 1912. Room 1311 International Life Building, St. Louis, Mo.

STANDING COMMITTEES.

Surveys and examinations.—Ockerson (chairman), Ritter, Beach.

Gages and high waters.—Ritter (chairman), Warren, West.

Construction.—Townsend (chairman), Ockerson, Warren, West, Beach.

Dredges.—Ockerson (chairman), Warren, Beach.

Levees.—Ockerson (chairman), West, Beach.

OFFICERS OF THE CORPS OF ENGINEERS IN CHARGE OF WORKS UNDER THE MISSISSIPPI RIVER COMMISSION.

First district (Cape Girardeau,¹ Mo., to foot of Island No. 40, 270 miles) and second district (foot of Island No. 40 to White River, 173 miles).—Maj. Michael J. McDonough, customhouse, Memphis, Tenn. (From Aug. 12, 1916, S. O. No. 137, W. D. June 12, 1916.)

Third district (White River to Warrenton, Miss., 214 miles).—Maj. John R. Slaterry, P. O. Drawer 404, Vicksburg, Miss. (From Dec. 24, 1913, S. O. No. 175, W. D. July 29, 1913.)

Fourth district (Warrenton to Head of Passes, 453 miles).—Maj. W. G. Caples, until November 30, 1916. Maj. Richard C. Moore, 12th Floor, Queen & Crescent Building, New Orleans, La. (From Nov. 30, 1916, S. O. No. 258, W. D. Nov. 3, 1916.)

Surveys, dredges and dredging, gages, levees Cape Girardeau to Rock Island, and office of secretary.—Maj. Clarke S. Smith, Room 1311, International Life Building, St. Louis, Mo. (From Aug. 1, 1912, S. O. No. 153, W. D. June 29, 1912.)

Brig. Gen. W. M. Black, Chief of Engineers, United States Army.

Maj. G. M. Hoffman, Rock Island to St. Louis.

Gen. Black, St. Louis to New Orleans.

Then I offer in evidence another paper which I shall call Exhibit C, the same being a statement from the observer of the United States Department of Agriculture, Weather Bureau, at Keokuk, Iowa, showing the gauge readings on the 10th, when the boat arrived at Keokuk, the gauge reading being 3.8; on the 11th, at the same hour, the gauge reading was 6.3; on the 12th, at the same hour, the gauge reading was 3.6, showing the admission of 3 feet of water, approximately, to carry that 4½-foot boat down the river to Alton.

¹ Cape Girardeau to Cairo, 54 miles, restricted to levee work.

EXHIBIT C.—UNITED STATES DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

Report of river station at Keokuk, Iowa, on the Mississippi River watershed for the month of November, 1916.

[Observations taken at 8 a. m., seventy-fifth meridian time, corresponding to 6.54 a. m. local time: Height of flood stage, 14 feet. Elevation of zero of gage above mean sea level, 477.4 feet.]

READING OF RIVER GAGE.

November 8.....	4.0
November 9.....	4.6
November 10.....	3.8
November 11.....	6.3
November 12.....	3.6
November 13.....	4.4

FRED. Z. GOUWISCH,
Observer.

Data as requested by yours of December 15.

I offer now the statement of Mr. A. F. Becker, of Hannibal, Mo., who is in charge of the gauge there. It shows that on the 11th of November, 1916, a fall of 7 inches, according to the gauge. That was before the arrival of the wave sent through to keep this official boat going, and on the 12th there was a rise of 16 inches at Hannibal, far below the dam, showing the effect of these waves on the river, as this 3 feet of water was permitted to go through.

I shall call that Exhibit D.

EXHIBIT D.

HANNIBAL, MO., December 17, 1916.

STRECKFUS STEAMBOAT LINE,
St. Louis, Mo.

DEAR SIR: The gage readings at Hannibal Bridge, from November 8 to 13, taken at 7 a. m., are as follows:

November 8, 4 feet 10 inches; rise, 3 inches.
November 9, 5 feet 1 inch; rise, 3 inches.
November 10, 5 feet 3 inches; rise, 2 inches.
November 11, 4 feet 8 inches; fall, 7 inches.
November 12, 6 feet; rise, 16 inches.
November 13, 4 feet 7 inches; fall, 17 inches.

Yours, very truly,

A. F. BECKER.

I offer as Exhibit E a letter from the meteorologist of the United States Department of Agriculture at Hannibal, Mo., dated December 16, 1916, to the Streckfus Steamboat Line, St. Louis, Mo., showing the river stage at Hannibal, Mo., during the month of November, 1916, as well as the fluctuations. That shows the fluctuations caused by these waves, and it is offered for the purpose of showing particularly the wave that they found it necessary to put into the river in order to enable this official boat to reach Alton.

I ask the permission of the committee to insert later on my own statement in reference to these matters, so that the committee will not have the trouble of going through these exhibits for information which they may desire.

EXHIBIT E.

UNITED STATES DEPARTMENT OF AGRICULTURE,
LOCAL OFFICE OF THE WEATHER BUREAU,
Hannibal, Mo., December 16, 1916.

STRECKFUS STEAMBOAT LINE,
St. Louis, Mo.

GENTLEMEN: Complying with your letter of the 15th, relative to river stages, I beg leave to inclose herewith a copy of our monthly report for November, 1916, showing the stages of the river at 7 a. m. each day.

Very respectfully,

B. L. WALDRON, *Meteorologist.*

Monthly meteorological summary, Hannibal, Mo., November, 1916.

Date.	Temperature.			Precipitation.	Character of day.	River stage.
	Maxi-mum.	Mini-mum.	Mean.			
	° F.	° F.	° F.	Inches.		
1	74	35	54	0	Clear	4.6
2	65	37	51	0	do.	4.8
3	71	40	56	0	Cloudy	5.0
4	74	54	64	0	Clear	4.8
5	79	49	64	0	do.	5.0
6	78	61	70	0	do.	5.0
7	78	64	71	T.	do.	4.6
8	69	42	56	0.77	Cloudy	4.9
9	57	38	48	.01	Clear	5.1
10	61	42	52	0	do.	5.2
11	52	36	44	0	do.	4.7
12	42	30	36	0	Cloudy	6.0
13	30	16	23	T.	do.	4.6
14	28	12	20	0	Clear	5.0
15	32	14	23	0	do.	4.8
16	52	22	37	0	do.	4.9
17	48	27	38	0	do.	4.9
18	55	21	38	0	do.	5.3
19	68	34	53	0	do.	4.9
20	65	39	52	0	do.	5.0
21	39	35	37	.45	Cloudy	5.3
22	53	38	46	.67	do.	5.4
23	48	36	42	.11	do.	5.4
24	36	23	30	0	Clear	5.3
25	44	20	32	0	Part cloudy	5.0
26	56	34	45	0	do.	4.8
27	57	46	52	0	Cloudy	4.7
28	61	41	51	0	Part cloudy	5.0
29	55	35	45	0	Clear	5.1
30	56	30	43	0	do.	4.8
Mean	56.1	35.2	45.6	2.01		

ATMOSPHERIC PRESSURE.

(Reduced to sea level; inches and hundredths.)

Mean, 30.10; highest, 30.49; date, 25th. Lowest, 29.48; date, 23d.

TEMPERATURE.

Highest, 79; date, 5th. Lowest, 12; date, 14th.

Greatest daily range, 39; date, 1st.

Least daily range, 4; date, 21st.

Mean for this month in—

1892	38	1905	44
1893	40	1906	41
1894	38	1907	41
1895	40	1908	45
1896	41	1909	51
1897	42	1910	38
1898	40	1911	37
1899	50	1912	44
1900	42	1913	51
1901	40	1914	46
1902	49	1915	47
1903	39	1916	46
1904	44		

Normal for this month, 40.5

Absolute maximum for this month for 25 years, 82.

Absolute minimum for this month for 25 years, 4.

Average daily excess (+) or deficiency (−) of this month as compared with the normal, +5.1.

Accumulated excess (+) or deficiency (−) since January 1, +116.

Average daily excess (+) or deficiency (−) since January 1, +0.3.

PRECIPITATION.

Total this month, 2.01; snowfall, T.
 Greatest precipitation in 24 hours, 1.08; date, 21-22.
 Snow on the ground at end of month, 0.
 Total precipitation this month in—

1892.....	3.17	1905.....	1.34
1893.....	1.25	1906.....	2.97
1894.....	1.77	1907.....	1.22
1895.....	4.40	1908.....	2.52
1896.....	1.73	1909.....	2.72
1897.....	2.07	1910.....	0.13
1898.....	2.58	1911.....	2.30
1899.....	1.83	1912.....	2.16
1900.....	1.27	1913.....	3.24
1901.....	0.74	1914.....	0.17
1902.....	2.53	1915.....	3.11
1903.....	1.28	1916.....	2.01
1904.....	0.26		

Normal for this month, 1.95.

Excess (+) or deficiency (—) of this month as compared with the normal, +0.06.

Accumulated excess (+) or deficiency (—) since January 1, +4.71.

WIND.

Prevailing direction, southwest; total movement, 7,727 miles; average hourly velocity, 10.7; maximum velocity (for five minutes), 33 miles per hour, from south, on 26th.

WEATHER.

Number of days clear, 19; partly cloudy, 3; cloudy, 8; on which 0.01 inch. or more, of precipitation occurred, 5.

MISCELLANEOUS PHENOMENA (DATES OF):

Auroras, none. Halos: Solar, 2d, 3d; lunar, 3d.

Hail, none; sleet, none; fog, dense, 22d, 28th, 29th.

Thunderstorms, none.

NOTE.—“T” indicates trace of precipitation.

Frosts are not recorded after the occurrence of “killing,” except in Florida and along the immediate coast of the Gulf of Mexico.

B. L. WALDRON, *Meteorologist, Weather Bureau.*

Mr. HUMPHREY. I move, Mr. Chairman, that the hearing be closed at 5 o'clock, and that we divide the time equally between the two sides.

Mr. SWITZER. I second the motion.

Mr. FREAR. That simply means this, that one side has already had some opportunity to be heard. These gentlemen have come quite a long distance to speak on this subject, and it is a project on which the Government has spent \$27,000,000. Why should we attempt to cut off debate on a subject as important as this one is. Let us have evening sessions if it is necessary. For one, I am willing to stay until 9 o'clock to-night. It is a very important proposition.

Mr. SMALL. Mr. Burgess suggests the hearing might go on to-morrow.

Mr. BOOHER. I suggest, Mr. Chairman, that we run until 5 o'clock, and then, if we are not through, meet at 10 o'clock to-morrow morning and continue until 12.

Mr. BURGESS. I second that motion.

Mr. HUMPHREY. I will accept the substitute of the gentleman if it is put in that shape.

Mr. SMALL. The suggestion is that we sit until 5 o'clock this afternoon, and then, if we have not finished by that time, we will meet again at 10 o'clock to-morrow morning and conclude the hearing at 12.

(The motion was carried.)

Mr. RAINEY. I desire now, Mr. Chairman, to present Capt. Joe Streckfus, president of the Streckfus Steamboat Co.

Mr. Chairman, before Mr. Streckfus begins his remarks, Mr. Mead wishes to present some affidavits. I am going to ask Mr. Mead to present them to the committee for printing in the record. They are the affidavits of captains and pilots of steamboats, testifying to the interruptions of navigation that they have experienced since this permission to store water during the nighttime and other times was granted.

Mr. SMALL. Unless it is proposed to read them, Mr. Mead need not take the time to go into the matter at all.

Mr. MEAD. Pardon me for the suggestion, Mr. Chairman, but unless the committee thoroughly understands these different crossings, and how we stuck on these different crossings, and the difficulties that the different captains had, I do not think the committee will catch the drift as quickly, when Capt. Streckfus goes over his data that he has here, as they would if the affidavits are read. I only suggest that in fairness to you and in fairness to us.

Mr. RAINEY. Do you want to read the affidavits?

Mr. MEAD. Yes, sir.

Mr. RAINEY. Well, go ahead.

(The affidavits referred to are as follows:)

STATE OF ILLINOIS, *County of Adams, ss:*

Capt. D. W. Wisherd, being first duly sworn according to law, deposes and says that he is a resident of the city of Quincy, in the State of Illinois, and president of the Wisherd Line Steamers, operating a line of excursion steamers in and upon the Mississippi River and its tributaries, and that he is a licensed master and pilot of steamers; that said Wisherd Line was so engaged in operating its steamers as aforesaid during the year A. D. 1916, and that during such time as such master and pilot he was familiar with the stage and conditions of the river in the vicinity of Keokuk and Quincy, and as the president of said company received the reports from the captain and pilot of the steamer *G. W. Hill*; that on the 22d day of August, A. D. 1916, the steamer *G. W. Hill* carried an excursion from the city of Hamilton, Ill., to the city of Quincy, Ill., and, while the stage of the water was rather low, the steamer did not experience any great amount of difficulty in negotiating the bars and crossings in the river; on the following day, August 23, the same steamer took an excursion from Quincy, Ill., to Keokuk, Iowa, and on this trip she did experience a great deal of difficulty in getting over the bars and crossings; the stage of the river showed quite a noticeable fall; and on the following day, August 24, the same steamer took an excursion from Quincy, Ill., to Hannibal, Mo., and about half way between the said cities the said steamer experienced a great deal of difficulty the same as the previous day; that on September 4, 1916, the same steamer took an excursion from Keokuk, Iowa, to Hannibal, Mo., and about half way between Quincy and Hannibal the said steamer was unable to get over a bar and by reason thereof compelled to turn around and come back to Quincy and disappointed about 700 passengers who had paid their passage to Hannibal, and by reason of inability to reach destination the said steamer had to refund to some of its passengers the fare paid. This was a Labor Day excursion.

Dependent further says that said Wisherd Line has its fleet consisting of the steamer *G. W. Hill*, steamer *Frontenac*, and barge *Mississippi* laid up in winter quarters in what is commonly called Quincy Bay, at Quincy, Ill., during the winter of 1916 and 1917 and that during said time said fleet has been constantly and frequently bothered with the fluctuation of the water in said bay and has been put to considerable expense and trouble in caring for said fleet thereby; that there frequently has been a rise or

fall or fluctuation of the water of 2 feet within 24 hours; that upon one occasion within said time while the water in said bay was frozen over the water dropped 2 feet within 24 hours and the entire fleet above mentioned became grounded, and this deponent has to assemble a crew of men to cut the ice and had to use jack screws to get said fleet afloat, that this work took three days and cost said Wisherd Line a considerable amount of money; that on many other occasions the sudden rise and fall of said river tripped up the spars put out to keep the steamers off the bank, and that said Wisherd Line steamers at various other times has been put to considerable annoyance and expense by reason of the sudden rise and fall of said river. And further the deponent says not.

D. W. WISHERD.

Subscribed and sworn to before me this 9th day of February, A. D. 1917.

[SEAL.]

JOHN F. GARNER,
Notary Public.

STATE OF MISSOURI,
City of St. Louis:

Personally appeared before the undersigned authority, John Streckfus, who, after being duly sworn, deposes and says:

That I am president and general manager of the Streckfus Steamboat Line, plying between St. Louis, Mo., and St. Paul, Minn. That I have been a duly and legally licensed steamboat captain upon the Mississippi River for the past 30 years, in which time I have owned, built, and controlled steamers. That between St. Louis, Mo., and St. Paul and intermediate points I have been running and going over and between said points for the past 30 years; having passed through Keokuk Dam in transit to and fro, stopping going up and on returning at the following places and others: Clarkeville, Mo., Louisiana, Mo., Hannibal, Mo., Quincy, Ill., and Keokuk, Iowa, and returning back to St. Louis; I know the condition of the river between these points for the year 1916, and more especially from July 15 to October 1, 1916, to the end of season 1916.

For the past 15 years between St. Louis and Keokuk I have noticed the fluctuations upon the river well, noticed during the past three years the irregular flow of water at irregular times, and that it retards and hurts river navigation between Keokuk and Alton, Ill. I know and see the effects of river navigation below the Keokuk Dam and Alton, Ill., and this irregular flow through said dam not only impedes, retards, and is destroying river navigation, in my opinion, between these places. The river is all filling up with sedimentation, account of low and slow water, and gets worse each year; last year was the worst year the steamboat men on the upper Mississippi have experienced for a long time and that I have ever experienced, boats grounding all the time. The boat I would go upon would labor much over the extreme shallow water, and losing time every minute. This went on when not going aground, which happened regularly to most of our steamers, either going up or returning from St. Louis, from and between Alton, Ill., and Keokuk, Iowa. All of our steamers each carry two good reliable pilots, who have been upon this river for years, who know the channel, not only as always run by them, but as instructed by the United States Engineer Department, and try at all times to remain in said channel, but with it all get grounded.

I did not experience any of this trouble before the Keokuk Dam was built, and I ran steamers at that time over the same part of the river. The uniform regular flow of water then seemed to keep channel open and water flowed freer and boats seemed speedier and had less laboring. Laboring is caused by low and shallow water, which I now find occurs to all our steamers between Keokuk and Alton, Ill.; ours as well as all lines have same trouble.

One of our steamers from St. Louis to Keokuk can go into Keokuk, say, 7 to 10 hours late; she, after passing through said lock, will not lose a particle of time, generally, from Keokuk to St. Paul, a distance of 400 miles; so far as river is concerned, and as for boat laboring, we notice little of it above the lock. The same effect south to dam, but after passing through lock, from Keokuk to Alton, our boat's trouble again begins.

I was captain of the steamer *Quincy* on her last trip north, leaving St. Louis about September 3, 1916; we ran aground at old Taylor's crossing, between Louisiana and Hannibal, and stayed aground all night long. Also we burned out four boilers here, pumping in sand, etc.; this at a great cost to us. We were then right in the supposed channel, as run and as given us by the United States Engineer Department. We also had a skiff out sounding and found we were in the deepest water there. We again stuck this next morning at Whitney's crossing, near Quincy, Ill.; stuck there several hours; then, when getting off and ready to go, we found the steamer *Dubuque* aground.

same place, and pulled at her about seven hours longer, then got her off. This all happened at same crossing.

I have noticed the fluctuations, etc., viz, at Keokuk; would pull in there, unload passengers, and when steamer was ready to depart several hours later, water had dropped at least 8 to 12 inches, and leave the boat hard aground. Have noticed on my trip the falling off of the water at Quincy, at Hannibal, at Louisiana, and at Clarks-ville, at least a foot or more in a day. You must understand that we captains, so fearful of low water and grounding, are ever alert, looking at the water gauges, marks, posts, islands, etc., so as to notice the fluctuations that happen so often between Alton and Keokuk. I have heard nearly all of our pilots at different times, on our various steamers, say to me as I was going over the river, and while they were at the wheel, "What on earth is the matter with this river?" Boat won't steer, laboring hard, water low and shallow, and hardly any speed whatever, all caused from this irregular flow of water through the said Keokuk Dam, which is simply ruining all navigation below the dam as far as Alton.

I can say, in my own opinion, that the Mississippi River, from Alton to Keokuk, to-day is in a far worse condition than it was before this said Keokuk Dam was built. The regular flow of water prior thereto kept the channels open and the river in much better condition, and river navigation has been hurt much, and if it gets any worse there will be no navigation between these points named.

Many a morning coming south and through dam, landing at Keokuk about 3 a. m., shore line would show fall approximately a foot, which, on the sloping bank at this particular landing, would mean that "stage planks" would fall short off platform 10 or 15 feet. Again we go into the same landing on our upstream, say about 3 p. m., and would have no trouble in reaching platform. Plenty of water.

My opinion is that if a certain, regular, even flow of water would be let through said dam both day and night, that said river below the dam would cut and slough its channels and not impair river navigation as is now done. But by letting said water out in quantities at times, it overflows said artificial improvements, does not run through the regular course of channel, as usual, and does not cut or slough out the river, as the power company and the United States engineers seem to think.

Lake Cooper, above the dam, backs the water up above Burlington, Iowa. I passed through this lake all during the year 1916, and noticed that there was quite a raise in said lake, more especially during the months from July 15 to October 1. I notice the islands fully submerged, and other marks which I have so frequently passed during the season. This rise, in my judgment, was much higher and more noticeable than during the month of June preceding. At this same time I also noticed the dropping river below the said dam, and wondered about this storing of water above the said dam; in fact, spoke to several parties about same. My guardrails upon my steamer coming into the lock—from the lake I noticed how near the top of the walls and the guardrails were to each other, much different than earlier in the season.

This past year has been one of the worst seasons that I had experienced for many a year. Our steamers were unable to carry a capacity load of freight or anywhere near same; in fact, we could only carry and allowed a limited amount of freight. I have seen, myself, many a dray load filled with freight refused, which had come down to go up on steamer, which was then lying at the dock ready to depart, and in ample time to be received. Had we accepted and taken same, gotten anywhere near capacity load, we would have laid and been grounded after passing Alton, and possibly stayed there 10 to 12 hours, or until the power company allowed the water through which was due.

This was not an occasional occurrence; it got to be an every day occurrence, where one of our steamers would ground from July 15 to end of the season of 1916.

It got so bad that it was impossible for us to continue our schedules, and near the end of the season we had to cease business. But nearly a month later, and after we had stopped business, the Mississippi River Commission, when water was higher in the river than when we stopped, came down from and near Warsaw, below Keokuk, on the 34-foot wave, which was given them by the power company and the United States engineers.

JOHN STRECKFUS.

Sworn and subscribed to this 12th day of February, 1917.

[SEAL.]

JOHN D. V. PRIOR,
Notary Public, City of St. Louis, State of Missouri.

My term expires February 18, 1919.

STATE OF MISSOURI,

City of St. Louis:

Personally appeared before the undersigned authority, Harry Rogers, who, after being duly sworn, deposes and says:

(1) That I am a duly and legally licensed steamboat captain upon the Mississippi River, and have been for past five years; and between St. Louis, Mo., and Burlington, Iowa, and intermediate points, two years, passing through the Keokuk Dam in transit to and fro when making Burlington trip. When making Keokuk, Iowa, or Quincy, Ill., stopping and returning from these places, to St. Louis. Leaving St. Louis and making these trips, or trying to make them, during year 1916, from June 1, 1916, to end of season, and more especially do I remember conditions from July 1 to end of season, 1916.

(2) I am well acquainted and know and see the effects upon river navigation below the Keokuk Dam and Alton, Ill., and the irregular flow of water through said dam at such irregular times impedes, retards, and is destroying river navigation, in my opinion, between these points. The river is all filling up with sedimentation account low and slow water, and gets worse each year, and last year was the worst year I ever experienced. Grounding all the time. I make two round trips weekly, that would total four trips both ways—night and day time. My boat would nearly shake herself to pieces laboring over the extreme shallow water, and losing time every minute; this went on when not going aground, which happened regularly to my steamer either going up or returning to St. Louis, from and between Alton, Ill., and Keokuk, Iowa. I have two as good pilots as there is upon the river.

(3) Further as to the rise and fall of water south of the Keokuk Dam and right at our warehouse, namely, at Keokuk; I would pull into there, make the landing, and put out my stageplank to connect with landing platform; same would not reach by several feet, account low water; after remaining there some time could make stageplank meet platform easily; water had risen in next two to four hours. Have seen just the reverse, and had to be extremely careful to not lose out when water fell after landing. Have noticed it raise a foot in a short time there, and have seen it fall a foot or so in a few hours' time. All the fishermen there complain, as it leaves all their boats, after landing at the bank, high and dry. This I have seen, and within, to-wit, from July 1 to the end of the season, 1916.

(4) The lake above dam goes back, to wit, some 60 miles, and is from 1 to 3 miles wide at places. I noticed a number of islands which were submerged in Lake Cooper, above the Keokuk Dam, on to-wit, from July 1 to end of season, 1916, passing same often. That I noticed these islands mentioned from July 1 to the end of season 1916 were more submerged and a higher stage of water therein than I noticed during the month of June. I also noticed that my guard rails upon my steamer coming into the lock and dam how near the top of the walls the guard rails were. This showed me of the lake being higher at this time mentioned in this paragraph than prior thereto.

(5) I have also noticed the fluctuations while tied up, and my steamers' position completely changed, etc. Not only at Keokuk, but at Quincy, Ill., Hannibal, Mo., Louisiana, Mo., and Clarksville, Mo., and have been inconvenienced many, many times to get my stage plank to reach platform. A specific instance of this was this past season, at Louisiana, Mo., mentioned above. I had so much trouble landing that I asked our agent there to make an extension to platform, so that I could land on my return trip, same day. When I returned there was no need of extending the platform, there was plenty of water there; this all happened the same day, and was not caused by any rainfall, or anything unusual, for there had been no rain for past 10 days or more. The water was clear, when muddy shows a rainfall. Agent's name is Mr. Elmer Todd, Louisiana.

(6) Laboring after leaving and passing through the Keokuk Dam north, or down through same, coming south, does not happen to affect us, and we have no trouble with our speed. But such as this south of the dam is real bad.

(7) Such low and poor water some nights, and dark, and no lights or buoys, had to lay up to the bank until daylight, for I did not want to take any chances with my human cargo of passengers. As for taking freight we had to limit our capacity, and many times refuse cargoes, for had we loaded capacity we'd stick hard and fast and lay there a long time. Yet we were always in the supposed channel, as we always ran same, and as given us by the United States Engineer Department. My boat draws light 32 inches, and loaded ordinarily, 3½ to 4 feet.

CAPT. HARRY ROGERS,

Captain and Commander Steamer "Dubuque," 1916.

Sworn to and subscribed to before me this February 9, 1917, at St. Louis, Mo.

[SEAL.]

T. M. GARRISON,

Notary Public, City of St. Louis, State of Missouri.

My term expires December 19, 1919.

STATE OF MISSOURI,
City of St. Louis.

Personally appeared before the undersigned authority, A. O. Day, who after being duly sworn, deposes and says:

- (1) That I am a duly and legally licensed steamboat captain upon the Mississippi River, and have been for the past 30 years, and between St. Louis and St. Paul, Minn., and intermediate points, 30 years, passing through the Keokuk Dam, in transit, to and fro, stopping going up, and on returning at the following places, and others: Clarksville, Mo., Louisiana, Mo., Hannibal, Mo., Quincy, Ill., and Keokuk, Iowa, back to St. Louis. Leaving St. Louis and making these trips, or trying to make them, a round trip, St. Louis, Mo., to St. Paul, Minn., and return every 10 days, this all during the year 1916, from June 1, 1916, to October 1, 1916, and more especially do I remember conditions from July 1, to end of season 1916.
- (2) I am well acquainted, and know and see the effects of river navigation below the Keokuk Dam and Alton, Ill., and the irregular flow of water through said dam at such irregular times impedes, retards, and is destroying river navigation, in my opinion, between these places, viz: Alton and Keokuk. The river is all filling up with sedimentation, account of low and slow water, and gets worse every year, the last year was the worst year the steamboats on the Upper Mississippi have experienced for a long time, and that I have experienced. Grounding all the time. My boat would labor much over the extreme shallow water, and losing time every minute this went on when not going aground which happened regularly to my steamer *St. Paul* either going over up or returning to St. Louis, from and between Alton, Ill., and Keokuk, Iowa. I have two good reliable, experienced river pilots with me.
- (3) The lake above dam goes back from 60 miles and is from 1 to 3 miles wide at places. I noticed a number of islands which were submerged in Lake Cooper, above the Keokuk Dam from July 1 to end of season, 1916, passing same often. That I noticed these islands mentioned from July 1 to end of season, 1916, were more submerged, and at a higher stage of water therein than I noticed during the month of June. I also noticed that my guard rails upon my steamer, coming into the lock from dam, how near the top of the walls the guard rails were. This showed me of the lake being higher at this time mentioned in this paragraph, and prior thereto.
- (4) I have also noticed the fluctuations of the river, not only at Keokuk but at Quincy, Ill., Hannibal, Mo., Louisiana, Mo., and Clarksville, Mo., and have been inconvenienced many times to get my stage-plank to reach platforms at the various places.
- (5) As for taking freight, we had to limit our capacity, and many times refuse cargo, for had we loaded to our capacity, would have struck hard and fast and laid on some of these crossings for a long time to come. We were always in the supposed channel as we always ran same, as was given to us by the United States Engineer Department. My boat draws light, 32 inches, and loaded ordinarily, 3½ feet.
- (6) I had no trouble coming north, on this big steamer, *St. Paul*, after passing through said Keokuk Dam going north, had no further trouble with the speed or laboring on the trip, clear to St. Paul, Minn., at least 400 miles distance north of the dam. I had no trouble coming south, until after passing through said dam.
- (7) All our bad experiences are below the dam, both coming upstream and going downstream, day or night, and more especially at Fox's Crossing, Lone Tree Crossing, Whitney's Crossing, Old Tom Taylor's Crossing, Atlas Island Crossing, being delayed in grounding at most all of these crossings.
- (8) I can also say, in my opinion, that the Mississippi River, from Alton to Keokuk to-day, is in a far worse condition than it was before this said Keokuk Dam was built. The regular flow of water, both day and night flowing, prior thereto, kept the channels open and the river in much better condition, and river navigation has been hurt much, and if it gets any worse than now is, there'll be no navigation between these points named.
- (9) Many a morning, coming south from St. Paul and through dam, landing at Keokuk, about 3 a. m., shore line would show fall approximately a foot and more, which, on the sloping bank at this particular landing, would mean that stages would fall short of platforms, 10 or 15 feet. Again, when we go into the same landing on our upstream trip, going north, say about 3 p. m., would have no trouble in reaching platform; plenty of water.

A. O. DAY,
Captain and Commander Steamer "*St. Paul*."

Sworn to and subscribed to before me this February 10, 1917, at St. Louis, Mo.

[SEAL.]

EMIL A. ROEBKE,
Notary Public, City of St. Louis, State of Missouri.

My term expires September 7, 1919.

STATE OF MISSOURI, *City of St. Louis.*

Personally appeared before the undersigned authority John W. Warren, who, after being duly sworn, deposes and says:

(1) That I am a duly and legally licensed steamboat captain upon the Mississippi River, and have been for the past 25 years, and between St. Louis, Mo., and St. Paul, Minn., and intermediate points three years, passing through the Keokuk Dam in transit to and fro, stopping going up and on returning at the following places, and others: Clarksville, Mo.; Louisiana, Mo.; Hannibal, Mo.; Quincy, Ill.; and Keokuk, Iowa, back to St. Louis. Leaving St. Louis and making these trips, or trying to make them, a round trip, St. Louis, Mo., to St. Paul, Minn., and return every 10 days; this all during year 1916, from June 1, 1916, to October 1, 1916. And more especially do I remember conditions from July 1 to end of season 1916.

(2) I am well acquainted and know and see the effects of river navigation below the Keokuk Dam and Alton, Ill., and the irregular flow of water through said dam at such irregular times impedes, retards, and is destroying river navigation in my opinion between these places, viz: Alton and Keokuk. The river is all filling up with sedimentation account low and slow water, and gets worse each year. The last year was the worst year the steamboats on the upper Mississippi have experienced for a long time, and that I have experienced. Grounding all the time. My boat would labor much over the extreme shallow water, and losing time every minute. This went on when not going aground, which happened regularly to my steamer *Quincy*, either going up or returning to St. Louis, from and between Alton, Ill., and Keokuk, Iowa. I have two good reliable, experienced river pilots with me.

(3) The lake above dam goes back 60 miles and is from 1 to 3 miles wide at places. I noticed a number of islands which were submerged in Lake Cooper, above the Keokuk Dam, on July 1 to end of season 1916, passing same often. That I noticed these islands mentioned from July 1 to end of season 1916 were more submerged and at a higher stage of water therein than I noticed during the month of June. I also noticed that my guard rails upon my steamer coming into the lock from dam how near the top of the walls the guardrails were. This showed me of the lake being higher at this time mentioned in this paragraph and prior thereto.

(4) I have also noticed the fluctuations of the river while tied up. Not only at Keokuk but at Quincy, Ill.; Hannibal, Mo.; Louisiana, Mo.; and Clarksville, Mo., and have been inconvenienced many times to get my stage plank to reach platform.

(5) As for taking freight, we had to limit our capacity and many times refuse cargo, for had we loaded to our capacity would have stuck hard and fast and laid on some of these crossings for a long time to come. We were always in the supposed channel, as we always ran same as was given to us by the United States Engineer Department. My boat draws light 3½ feet and loaded ordinarily 4½ feet.

(6) I had no trouble coming north on this big steamer *Quincy* after passing through said Keokuk Dam going north. Had no further trouble with the speed or laboring on the trip clear to St. Paul, Minn., at least 400 miles distance north of the dam. I had no trouble coming south until after passing through said dam.

(7) All our experiences are below the dam, both coming and going downstream, day or night, and more especially at Fox's Crossing, Lone Tree Crossing, Whitney's Crossing, Old Tom Taylor's Crossing, Atlas Island Crossing, being delayed and grounding at most all of these crossings.

JOHN W. WARREN.

Captain and Commander Steamer "Quincy."

Sworn to and subscribed to before me this February 9, 1917, at St. Louis, Mo.

[SEAL.]

T. M. GARRISON.

Notary Public, City of St. Louis, State of Missouri.

My term expires December 13, 1919.

KEOKUK, IOWA, August 30, 1916.

STRECKFUS STEAMBOAT LINE.

St. Louis, Mo.

GENTLEMEN: I beg to give you the following facts: On August 29, 1916, I noticed the rise and fall of water at gauge south of Keokuk Dam.

This was early in the morning of August 29, 1916, about 7 a. m., when I noticed the register or gauge, and about two hours thereafter, or about 9 a. m., I saw the gauge again, this on the south end of Keokuk Dam, and it read 3½ inches lower than at 7 a. m.—had fallen in about two hours. I also noticed the gates of spillways and found many of them open early, at and before 7 a. m., and then before noon only a few were open.

On August 30, 1916, I went with others to notice the rise and fall of the water at gauge south of Keokuk Dam. It was early in the morning, about 7 o'clock, and the water registered at 3 feet (splitting the 3 squarely in half). About two hours thereafter, or about 9 a. m., I saw the gauge again and it read only 2½ feet—had fallen 6 inches inside of two hours.

I also noticed about four of the gates or spillways open in the early morning, before and at 7 a. m., but later they had only one or two open, as seen from a boat. It seems the practice to have the water at a certain height at south end of dam each day, at 7 a. m., at and about the usual stage, and within an hour or two thereafter it falls 4 to 6 inches, and this pretty regularly.

I understand this water is held back during nighttime to have more to generate power during nighttime. I often noticed this rise and fall below the dam with nothing affecting the same but this opening and closing of spillways. Often during daytime boats will row up and land on back, and within an hour same is high and dry. Account of no water in river. This not only happens to one boat, but to most all; does not only happen to small boats, but steamers sometimes have same trouble. This all takes place within several hours' time, on different days, and is nothing unusual. Then the reverse effect also happens when water is let out and river rising. I am aware of and about rainfall above, etc., causing muddy water, and say that this rise and fall is not caused by that, but by the dam.

Yours, truly,

T. S. HARRINGTON.

Witness:

H. C. MEAD.

On Friday, September 8, 1916, the boathouse, foot of Main Street, owned by Wilkenson & Laton, the water in river fell so fast that it sank the boat, and Mr. Califf (secretary to Kellogg) saw same. River fell 10 inches in an hour and a half.

T. S. HARRINGTON.

CLARKSVILLE, Mo., September 5, 1916.

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (September 5) at 3 p. m., and will rise, and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up, and no dredges are put in, it will soon be impossible for steamers to navigate the river.

NICK HARTSTINE.

Owner of Clarksville Ferryboat.

Witness,

J. H. RUSH.

CLARKSVILLE, Mo., September 5, 1916.

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August, and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise, when water is clear we know the rise and fall is affected by the dam. Some days the water is 6 inches

higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night, it raised again 2 to 3 inches, then fell back, and on September 5, has fallen 4 inches since last night at 6 p. m., to to-day (September 5), at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well, as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up and no dredges are put in it will soon be impossible for steamers to navigate the river.

E. INGERSOLL.

Witness:

J. H. RUSH.

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August, and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 had fallen 4 inches since last night at 6 p. m. to to-day (September 5) at 3 p. m., and will rise and fall again.

It reaches us in waves—first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sandbars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up, and no dredges are put in, it will soon be impossible for steamers to navigate the river.

HARRY INGERSOLL.

Witness:

J. H. RUSH.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August, and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night, it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m., to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves—first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up, and no dredges are put in, it will soon be impossible for steamers to navigate the river.

FRANK INGERSOLL.

Witness:

J. H. RUSH.

CLARKSVILLE, Mo., September 5, 1916.

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August, and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level; then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m., to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days and for a long time prior thereto, and if it keeps up, and no dredges are put in, it will soon be impossible for steamers to navigate the river.

G. W. MIDDLETON.

Witness:

J. H. RUSH.

CLARKSVILLE, Mo., September 5, 1916.

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up and no dredges are put in it will soon be impossible for steamers to navigate the river.

ROBERT R. HARTSTINE.

Witness:

J. H. RUSH.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August, and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming down stream is not enough, nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up and no dredges are put in it will soon be impossible for steamers to navigate the river.

N. S. DEMPSEY.

Witness:

J. H. Rush.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here, otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches; then by Sunday noon, September 3, it had fallen to former level; then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough, to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south (south).

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up, and no dredges are put in it will soon be impossible for steamers to navigate the river.

ISAAC EMERY.

Witness:

J. H. Rush.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here; otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon (Sept. 3), it had fallen to former level, then Sunday night it rained again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again the small amount of water coming downstream is not enough nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water in my opinion should pass through the dam at all times both day and night.

I have noticed the above for the past 60 to 90 days and for a long time prior thereto and if it keeps up and no dredges are put in, it will soon be impossible for steamers to navigate the river.

J. M. FERU.

Witness:

J. H. BUSH.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here; otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before, then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level, then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5) at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream, is not enough nor has force enough to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up and no dredges are put in it will soon be impossible for steamers to navigate the river.

MARION ANDERSON.

Witness:

J. H. RUSH.

CLARKSVILLE, Mo., *September 5, 1916.*

I am personally acquainted with the rise and fall of the Mississippi River at and around Clarksville, Mo., and more especially for month of August and up to date.

The cause of this is the opening and closing of the gates or spills of Keokuk Dam. I know this, as the water coming down to us has been clear. If a rise comes and water is muddy, that is caused by rains above here; otherwise when water is clear we know the rise and fall is effected by the dam. Some days the water is 6 inches higher than the day before; then falls back to the former level, and possibly the next day will drop from 2 to 4 inches below this level. For specific data: On Saturday night, September 2, 1916, river raised here at least 6 inches to 8 inches, then by Sunday noon, September 3, it had fallen to former level; then Sunday night it raised again 2 to 3 inches, then fell back, and on September 5 has fallen 4 inches since last night at 6 p. m. to to-day (Sept. 5), at 3 p. m., and will rise and fall again.

It reaches us in waves, first high water, then low water, happening inside of and within about 12 hours. Same happens nights as well as daytime.

Again, the small amount of water coming downstream is not enough, nor has force enough, to keep the sand and sediment, etc., from settling and forming sand bars, etc., all along the river from Keokuk Dam south.

A regulated amount of water, in my opinion, should pass through the dam at all times, both day and night.

I have noticed the above for the past 60 to 90 days, and for a long time prior thereto, and if it keeps up, and no dredges are put in, it will soon be impossible for steamers to navigate the river.

L. F. TADDOCK.

Witness:

J. H. RUSH.

KEOKUK, IOWA, *August 29, 1916.*

What is your name?—C. F. Duncan.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below the Keokuk Dam at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall in one to two hours, all during the day.

How long have you noticed this?—A long time.

Does this happen often?—Yes; all the time.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The dam company.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation or obstruct same below dam?—Obstructs.

Have you noticed the gates open, if so, are they all open, or only a part, and for how long at a time?—Opened and closed at company's pleasure.

Do you notice some being opened, then closed up, only in the day about noon time?—Yes; closed much all day long.

Do you know why this is done?—To hold water for Power Co.

State, in your opinion, what you think should be done?—A uniform amount of water both day and night should flow through dam.

Does it hurt navigation below dam or not?—Yes.

Is it or not bad on river navigation, and will it not stop river navigation by steamers below dam in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water flow all the time.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance (big one).

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam day and night time?—No; they do not.

Have you noticed any fluctuations in the river below dam, in few hours time or not, about six or eight blocks below said dam, in the city limits of Keokuk, Iowa, state what?—Yes, many and many times; and here in past 30 days; bring boats in on water and are left high and dry.

C. F. DUNCAN.

Witness:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, *August 29, 1916.*

What is your name?—Alf McAdams.

Your occupation?—Boat man.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below the Keokuk Dam, at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall in 1 to 2 hours; all during daytime.

How long have you noticed this?—A long time.

Does this happen often?—Yes; all time in past 10 days.

What is the cause?—Opening and closing spillways.

Who is to blame?—The power company.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation or obstruct same below dam?—Obstructs.

Have you noticed the gates open? If so, are they all open or only a part, and for how long at a time?—Opened and closed at pleasure of the company.

Do you notice some being opened, then closed up, only in the day, about noon-time?—Yes; closed during daytime.

Do you know why this is done?—To lock up water for power company.

State in your opinion what you think should be done.—A uniform amount of water should flow through dam day and night.

Does it hurt navigation below the dam or not?—Yes; much.

Is it or not bad on river navigation, and will it not stop river navigation by steamers below dam in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water flow.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night) through same would it aid navigation below dam or not?—It would.

Do they let a regular stream of water through said dam, day and night time?—No; they do not.

Have you noticed any fluctuations in the river below dam, in few hours time or not, about 6 to 8 blocks below said dam, in the city limits of Keokuk, Iowa; state what?—Yes; boats are left high and dry in an hour's time.

ALF McADAMS.

Witnesses:

M. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, August 29, 1916.

What is your name?—J. O. Leighton.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below Keokuk Dam at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall in one and two hours, all during day.

How long have you noticed this?—A long time.

Does this happen often?—Yes; and much in past 25 days.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The Mississippi Power Co.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation, or obstruct same below dam?—Obstruct.

Have you noticed the gates open? If so, are they all open, or only a part, and for how long at a time?—Open and close, at company's option.

Do you notice some being opened, then closed up, only in the day about noon-time?—Yes; closed down in day.

Do you know why this is done?—To back up water for power.

State, in your opinion, what you think should be done?—A uniform amount of water pass through both day and night.

Does it hurt navigation below dam or not?—Yes.

Is it or not bad on river navigation, and will it not stop river navigation by steamers, below dam, in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water pass through day and night.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam, day and night time?—No; they do not.

Have you noticed any fluctuations in the river below dam in few hours time or not, about 6 to 8 blocks below said dam, in the city limits of Keokuk, Iowa? State what.—Leaves boat high and dry in an hour's time many days.

J. O. LEIGHTON.

Witnesses:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, August 29, 1916.

What is your name?—M. E. Hollingsworth.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with, and know about the rise and fall of the Mississippi River, at and below Keokuk Dam, at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall in 1 and 2 hours all during day.

How long have you noticed this?—A long time.

Does this happen often?—Yes; often and much in past 15 days.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The Mississippi River Co.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation, or obstruct same below dam?—Obstruct.

Have you noticed the gates open, if so, are they all open or only a part and for how long at a time?—Open and close at company's option.

Do you notice same being opened, then closed up, only in the day about noon time?—Yes; closed during day.

Do you know why this is done?—To back up water for power.

State in your opinion what you think should be done?—A uniform amount of water to pass through, both day and night.

Does it hurt navigation below dam or not?—Yes.

Is it or not bad on river navigation, and will it not stop river navigation by steamers, below dam, in time to come in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water pass both day and night.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam, day and night time?—No; they do not.

Have you noticed any fluctuations in the river below dam in few hours time or not, about 6 to 8 blocks below said dam, in the city limits of Keokuk, Iowa, state what?—Leaves boats high and dry in an hour's time, many days.

N. E. HOLINGSWORTH.

Witness:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, *August 29, 1916.*

What is your name?—A. T. Larson.

Your occupation?—Boatman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below Keokuk Dam, at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall in 1 to 2 hours, all during day.

How long have you noticed this?—A long time.

Does this happen often?—Yes, often; and much in past 15 days.

What is the cause?—Opening and closing of spillway.

Who is to blame?—The power company.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation, or obstruct same below dam?—Obstructs.

Have you noticed the gates open; if so, are they all open or only a part and for how long at a time?—Open and close at company's pleasure.

Do you notice same being opened, then closed up, only in the day about noon time?—Yes; closed during day.

Do you know why this is done?—To back up water for power.

State in your opinion what you think should be done.—A uniform amount of water to pass there, both day and night.

Does it hurt navigation below dam or not?—Yes.

Is it or not bad on river navigation, and will it not stop river navigation by steamers, below dam, in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water flow both day and night.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam, day and night time?—No; they do not.

Have you noticed any fluctuations in the river below dam, in few hours time or not, about 6 to 8 blocks below said dam, in the city limits of Keokuk, Iowa; state what?—Boats are left high and dry in an hour's time.

A. T. LARSON.

Witness:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, August 29, 1916.

What is your name?—Henry McAdams.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below Keokuk Dam, at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—Same will rise and fall every hour or so during day.

How long have you noticed this?—For three years and longer.

Does this happen often?—Yes; all the time, to date.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The water-power company.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation, or obstruct same below dam?—Obstruct.

Have you noticed the gates open; if so, are they all open, or only a part and for how long at a time?—Opened and closed at company's notion.

Do you notice some being opened, then closed up, in the day about noontime?—Closed during daytime and opened at night.

Do you know why this is done?—To back water for power.

State in your opinion what you think should be done?—Same amount of water should flow through dam day and night.

Does it hurt navigation below dam or not?—Yes.

Is it or not bad on river navigation, and will it not stop river navigation by steamers, below dam, in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let same amount of water flow all time.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam, day and night time?—No; cut same off during day and let out at night.

Have you noticed any fluctuations in the river below dam, in few hours time or not, about 6 to 8 blocks below said dam, in the city limits of Keokuk, Iowa; state what?—Yes; water will fall and let boat be high and dry on bank in 20 minutes.

The dam water in lake is raised daily about 2 feet higher, each day, to run and make the power at night. The water is held up during daytime and let out at night through the turbines. It would open four gates and keep open all time and run four turbines, it would keep a uniform stage of water below dam all the time, same as above.

H. McADAMS.

Witnesses:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, August 29, 1916.

What is your name?—T. E. Corder.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below the Keokuk Dam at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—When gates open will raise in two to three hours and fall in two to three hours all day.

How long have you noticed this?—Two or three months.

Does this happen often?—Yes; daily and most all time.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The Power Dam Co.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation or obstruct same below dam?—Obstructs.

Have you noticed the gates open; if so, are they all open or only a part and for how long at a time?—Open and shut them all day; after 10 p. m. have an extra one or two.

Do you notice some being opened then closed up only in the day about noon time?—Closed in day and open nights.

Do you know why this is done?—To make the power.

State in your opinion what you think should be done.—Certain number of the gates should be open all the time.

Does it hurt navigation below dam or not?—Yes; it does.

Is it or not bad on river navigation, and will it not stop river navigation by steamers below dam in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Leave gates open all the time.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit or a hindrance to river navigation below the dam?—A hindrance.

If said dam will allow a regular stream of water (both day and night through same) would it aid navigation below dam or not?—It would.

Do they let a regular stream of water through said dam day and night time?—No; they do not. Close up in day and open gates at night.

Have you noticed any fluctuations in the river below dam in few hours' time or not, about six to eight blocks below said dam, in the city limits of Keokuk, Iowa? State what.—Came up with the boat and in an hour boat high and dry.

T. E. CORDER.

Witnesses:

T. S. HARRINGTON.

H. C. MEAD.

KEOKUK, IOWA, August 29, 1916.

What is your name?—James H. Hudelson.

Your occupation?—Fisherman.

Your residence?—Keokuk, Iowa.

Are you acquainted with and know about the rise and fall of the Mississippi River at and below Keokuk Dam, at Keokuk, Iowa?—Yes.

What are your observations as to the rise and fall?—It rises and falls often through the daytime on account of the spillways.

How long have you noticed this?—Long time.

Does this happen often?—Yes, great deal, especially last 15 days.

What is the cause?—Opening and closing of spillways.

Who is to blame?—The Power Co., closing spillways.

Does this retard navigation south of Keokuk Dam or not?—Yes.

Does such as this aid navigation, or obstruct same below dam?—Obstructs.

Have you noticed the gates open; if so, are they all open, or only a part and for how long at a time?—Opened at night and closed during daytime.

Do you notice some being opened, then closed up, only in the day about noon-time?—Yes, in early morning and during day, noon and all.

Do you know why this is done?—To hold back the water.

State in your opinion what you think should be done?—An even amount of water passing through all time, day and night.

Does it hurt navigation below dam or not?—It does, much.

Is it, or not, bad on river navigation, and will it not stop river navigation by steamers, below dam, in time to come, in your best judgment?—Yes.

How would you suggest to remedy same?—Let water flow both day and night.

Do you think the United States Government is fully advised or aware of these conditions at Washington?—No.

In your best judgment is the Keokuk Dam a benefit, or a hindrance to river navigation below the dam?—A great hindrance.

If said dam will allow a regular stream of water (both day and night through same), would it aid navigation below dam or not?—Yes.

Do they let a regular stream of water through said dam, day and night time?—No, closed much during day to hold back.

Have you noticed any fluctuations in the river below dam in few hours time or not, about six to eight blocks below said dam, in the city limits of Keokuk, Iowa? State what.—Have seen boat row up to bank and be high and dry in an hour.

J. H. HUDELSON.

Witness:

T. S. HARRINGTON.

H. C. MEAD.

Mr. SMALL. Without objection, those affidavits will be handed to the stenographer and made a part of the record.

Mr. HUMPHREY. Mr. Mead, I would like to ask you one question before you take your seat. I would like you to state to the committee what you have done to bring this matter to the attention of the War Department, and when was the last time that you took any action?

Mr. MEAD. By and through letters; quite recently.

Mr. HUMPHREY. Are those letters going into the record?

Mr. MEAD. Capt. Streckfus will produce some, if you gentlemen want them. They will be put into the record. We have copies.

Mr. HUMPHREY. You have the replies?

Mr. MEAD. Some of them. We have replies from the War Department; little slips of paper, many only stating "Referred to So-and-so."

STATEMENT OF MR. JOSEPH STRECKFUS, REPRESENTING THE STRECKFUS STEAMBOAT LINE AND THE STEAMBOAT OWNERS' ASSOCIATION OF ST. LOUIS.

Mr. STRECKFUS. I have the dates here on which our steamers grounded below the dam above Alton for year 1916. The first one mentioned is our steamer *Quincy*, which grounded on August 22.

Mr. SMALL. You are referring to 1916 now?

Mr. STRECKFUS. Yes, sir.

There is a fluctuation at Keokuk Dam, from noon August 20, to noon, August 21, of 1.4 feet. On the next day, August 21, at Quincy, from 1 a. m., to August 22 at 1 a. m. the water fell eight-tenths foot.

Mr. HUMPHREY. Foot?

Mr. STRECKFUS. Eight-tenths foot; yes, sir.

At Hannibal, down the river 60 miles below Keokuk Dam, from 4 a. m. on the 21st to 2 p. m. on the 22d there was a fall of 0.6, or half a foot.

The next date on which we grounded was August 24. We grounded with the same steamer, the *Quincy*. From 6 p. m. on the 22d, to 3 a. m. on the 24th, there was a fall of 1.6 feet. At Quincy, the next day, the 23d, from 10 o'clock a. m. to 10 o'clock p. m. on the 24th, there was a fall of 1 foot.

At Hannibal, on the 23d, from noon to midnight on the 24th, there was a fall of 0.9 foot.

I am giving these figures in order to show that these boats were grounded at these different points, and so to connect this thing up. And from 10 p. m. to 2 a. m. on the 30th there was a fall of 0.4 foot.

We grounded again on September 3. From noon on September 2, to noon on September 3, there was a fall of 1 foot. From 10

p. m. on September 8 to 3 a. m. on September 9, there was a fall of 1.3 feet. Those are the dates on which the *Quincy* was grounded.

I shall now take up the *St. Paul*. On the steamer *St. Paul* we first had trouble on July 20, but I have not the blue print showing that. The next was August 9. From 10 a. m. on August 8 to midnight there was a fall of 1 foot. On August 19 we grounded again. From 3 p. m. on August 18 to 2 a. m. on August 19 there was a fall of 0.7. On August 29 we again had trouble. The fluctuation at Keokuk from 3 a. m., August 29, to 6 a. m., fall was 0.6; that is, there was a fall of one-half a foot.

That completes the data for the *St. Paul*. The next boat is the *Dubuque*. The first grounding was on August 24. From 6 p. m. on the 22d to 3 a. m. on the 24th there was a fall of 1.62. The next was on September 4. From noon on September 2 to noon on September 3 the fall was 1 foot. I have gotten my statistics from plans drawn by the Mississippi River Power Co., given to us, showing the fluctuations each day.

Mr. BOOHER. Before you leave this question of grounding, I want to ask you a question. During what months is the low-water period on the Mississippi River?

Mr. STRECKFUS. Usually in August.

Mr. BOOHER. Is that the time that you ground most?

Mr. STRECKFUS. Yes, sir.

Mr. BOOHER. If some arrangement were made to take care of this through the low-water period there would not be much harm to navigation in the other months of the year, would there?

Mr. STRECKFUS. No, sir.

Mr. BOOHER. Now, tell the committee at what dates you would begin and end this change in the use of the water there.

Mr. STRECKFUS. I should judge from the stage of the water at Keokuk it would be 6 feet—

Mr. BOOHER (interposing). What month would you begin in and how long a time would it take?

Mr. STRECKFUS. Well, if the river goes down to 6 feet and there is no rain, we have to have a flow of water there.

Mr. BOOHER. Then you have to have an equal flow of water?

Mr. STRECKFUS. Yes, sir. There is another thing in that connection. The fluctuation of the water in the river is causing sedimentation, and is filling up the river.

Mr. BOOHER. I understand that that could be fixed by letting the water in during the dry season?

Mr. STRECKFUS. Yes, sir; that would help. It would have to start 15 or 16 days before.

Mr. HUMPHREY. Would there not be some fluctuation in the stage of the water whether there was an artificial structure in the river or not? Is not that the season of the year when these heavy rains are frequent in the Mississippi River Valley?

Mr. STRECKFUS. No, sir. There is very little rain during that time. The rain comes in about eight days—all the rain.

Mr. HUMPHREY. Of course, I know the river does fluctuate a great deal of the time.

Mr. STRECKFUS. Yes. That fluctuation is clearly shown by the blue prints which I have and show you and offer. It will fall a foot and a half and the next day come back again. However, the natural

fall is such that it keeps on going until the rains come. This that I am referring to is a daily fluctuation.

Mr. HUMPHREY. Does that fluctuation show that it is caused by the company impounding the water?

Mr. STRECKFUS. Yes, sir; that is the idea I have, at least. For instance, speaking of this matter of fluctuation at Keokuk, the records show, by their own blue prints, that it amounts to one-half that at Quincy. In other words, if there is a foot of fluctuation at Keokuk, it would amount to approximately six inches at Quincy. That is a great deal of fluctuation.

Mr. BOOHER. Is Alton north or south of Quincy?

Mr. STRECKFUS. South, 200 miles.

There is another thing to be said in connection with this. The level of the pool at the Keokuk Dam was kept at a certain figure above that of Memphis. It stayed that way and was stationary from July 22, when this blue print was started, until July 30. From July 30 to August 20 they started storing water until it reached its crest, on the 22d, of 1 foot. In other words, they stored that much water while the natural river was falling. In other words, if they had let through the same amount of water that came into pond there would not have been any increase in the level. Instead of that there was a storage of water, and the water came into the lake. This when river falling fast and at about lowest.

Mr. BOOHER. How long a period did that cover?

Mr. STRECKFUS. Twenty-two days; our trouble started at that time.

Mr. HUMPHREY. After it once ran level, then that would not make any difference, would it; it would not fluctuate after that?

Mr. STRECKFUS. The river could be kept at that same stage, and we would have that water coming down the river during all that period. Instead there was a storage above the dam at the time when we needed it most.

Mr. HUMPHREY. As I understand you, during that month or so there was a great deal of storing of this water?

Mr. STRECKFUS. Yes, sir; from July 30 to August 20, 1916. There is an extreme fluctuation on many days of 1.4 feet or 1.6 feet. In other words, the river would fall that much in that short time. We complained to the Keokuk Power people on that trip. We got a wire from our captain of the trouble that they were having on August 26. They told us to take it up with Maj. Hoffman, at Rock Island. We did. We also took it up with Mr. Kellogg, manager of the Keokuk Power Co. Our reply from Maj. Hoffman was to the effect that the records showed that there was no material fluctuation whatever. At the same time, Maj. Meigs, of the United States Engineer Department, at Keokuk, was of the same opinion, that is, that there was no material fluctuation, according to their records. I ask to put into the record their gauge readings, which will show a number of cases of 1.3 to 1.6 feet of fluctuation in the period I have mentioned. In other words there was a fluctuation by their own records that they never seemed to notice.

Mr. HUMPHREY. Do you mean by that the Government records?

Mr. STRECKFUS. Yes, sir.

Mr. HUMPHREY. Who does the reading?

Mr. STRECKFUS. I got my records from the Keokuk Power Co. They made this blue print for us.

Mr. FREAR. What time prior to this last month of August did you have trouble there? What trouble did you have outside of the month of August?

Mr. STRECKFUS. That is the main complaint we have made about it.

Mr. FREAR. Did you have trouble last year?

Mr. STRECKFUS. We had trouble. When we see the engineers, or talk to them about it, they give us the same old answer, that there are no material fluctuations, but when the readings came in on the Keokuk Bridge for the 22d of August they showed 3.6 according to the weather reports. On the very next day, August 24, they showed 2.6, a fall of 1 foot.

Mr. HUMPHREY. Do I understand you to say that the Government engineers told you there was no material fluctuations?

Mr. STRECKFUS. Yes, sir.

Mr. HUMPHREY. And you say the company voluntarily furnished you a blue print—

Mr. STRECKFUS. Yes, sir.

Mr. HUMPHREY. Covering this particular period in which they said there was no fluctuation, showing this fluctuation which you refer to; is that correct?

Mr. STRECKFUS. Yes, sir. We have gone back with letters showing that there was a fluctuation at those times. We have sent letters to Maj. Hoffman and Maj. Meigs.

Mr. HUMPHREY. And you say this company voluntarily furnished you this information?

Mr. STRECKFUS. Yes, sir.

Mr. FREAR. Have you any information besides this to show that the water was withheld or stored?

Mr. STRECKFUS. Yes, sir. Maj. Meigs's report shows that there was a storage of water during those days. Then we have the readings from the Quincy Bridge and other data.

Mr. FREAR. Those will be put in the record?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. You attribute these fluctuations in the rise and fall of the river below the dam to the operation of the dam?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. To what particularly do you attribute it? I believe they used the water in the daytime?

Mr. STRECKFUS. Yes. They have to have this volume of water to generate power. At nighttime, when they are not using the water, they can store the water back. The lake does not show this fluctuation during the nighttime. There is a big lake up the river, and that is the reason, I figured, that the engineers have not noticed that storage. In the daytime, when they use the power, they let through an extra amount of water. That causes a rise during the day. At night it is just the other way. The water goes through during the day. In other words, there is a high, excessive period of water coming down, and then there is a low period of water.

Mr. SMALL. And this difference in the use of the water for generating power causes these fluctuations, you think?

Mr. STRECKFUS. Yes, sir; by the Power Co.

Mr. SMALL. And such use of water causes these fluctuations in the low-water stage of the river?

Mr. STRECKFUS. It fluctuates at the high-water stage just the same, but it does not hurt the steamboats.

Mr. SMALL. I am referring to the fluctuation which impairs the navigability of the stream.

Mr. STRECKFUS. That is just in the low-water period.

Mr. SMALL. Taking an average year, during what period is the river so low that the operation of the dam causes these fluctuations which impair navigation?

Mr. STRECKFUS. Mr. Chairman, that all depends on the local conditions. Sometimes the low-water period will be in July and at other times it will be in August.

Mr. SMALL. About how long each summer does it continue?

Mr. STRECKFUS. I do not think it lasts over 30 days.

Mr. SMALL. About 30 days each year the impounding of their portion of the water—that is, the amount of water which they consume—causes fluctuations in the use of it that impair navigation?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. What remedy, in your opinion, Capt. Streckfus, is there for this condition?

Mr. STRECKFUS. If they would keep the normal amount of flow, I think that would do it. If they would just keep the same amount going through every hour and at all times in the day and night, the same amount that comes to the dam, and let it out the same every day and night—

Mr. BOOHER (interposing). That is all, according to your idea, that is necessary during that period?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. Do you know to what extent that would impair the usefulness of the water plant or the power plant to the power company?

Mr. STRECKFUS. I do not know as to that; no, sir.

Mr. SMALL. Then, about 30 days each summer, varying somewhat, the operation of the power plant, in the use of the water above, becomes material with reference to the navigation of the river?

Mr. STRECKFUS. Yes, sir. During the low period of water the boats draw $3\frac{1}{2}$ or 4 feet. In practically all these crossings they get down to 4 feet of water before they start cutting out. Then there may be a sudden fluctuation, such as a dropping of 1 foot. That may mean at Quincy 6 inches. It will leave only 6 inches to go over, and that is just what we lack.

Mr. BOOHER. When you speak of fluctuations, it is below the dam that you refer to?

Mr. STRECKFUS. Yes, sir; below the dam.

Mr. BOOHER. It is your idea that the United States engineers confine it to above the dam?

Mr. STRECKFUS. I will tell you my idea of the matter. Whenever we go to the Government end of it we are referred to the power company. When we go to the Government to get records, we find that their only method of keeping track of these things is a dial such as I have here. That shows very little fluctuation. You can compare

this with the power company's data and you will see that it is not worth anything. Here, for instance, is a mistake of 1 foot made by the Government engineers; that is, the Government engineers found a mistake of 1 foot. In other words, it is recorded as 2.8 feet, in ink, according to the diagram, when it should be 3.8. The records that they have there are not worth anything, and the Government can not find anything from them.

Mr. TREADWAY. In what way have the Government engineers referred you to the power company?

Mr. STRECKFUS. In writing. I have letters. There is a letter from Maj. Meigs.

Mr. TREADWAY. Do I understand that you have asked the Government officials for certain information which should be published, and in order to secure it they have referred you to a private corporation as the authority on which they would rely for information?

Mr. STRECKFUS. Yes, sir. I have a letter here from Maj. Meigs dated September 7, 1916.

Mr. TREADWAY. That is, last year?

Mr. STRECKFUS. Yes, sir; Maj. Meigs says:

You can readily see that if the daily amount of water was not passed the level of Lake Keokuk would rise. This record of lake level is also kept by us, but much more minutely by the Water Power Co., who have more delicate gauges than we.

Mr. KENNEDY. Who writes that, did you say?

Mr. STRECKFUS. Maj. Meigs.

Mr. TREADWAY. Does he suggest further on to consult the power company to secure the information you want?

Mr. STRECKFUS. Right here (reading):

In regard to the party in charge of regulating the flow of water, his name is Mr. Bolster, and he is especially retained to see that this water is carefully regulated. He is a special man. He gets his information as to the stage of water above and below the dam from automatic gauges and frequently they call our men at the lock and get their readings for comparison.

Mr. TREADWAY. Who is Mr. Bolster?

Mr. STRECKFUS. He is an employee of the power company. [Resumes reading.]

As to getting copies of their gauge readings, I think the best thing for you to do is to come here and look at their records yourself. If you wish, I will go with you and lend you such assistance as I can.

Mr. TREADWAY. Since that is from Maj. Meigs it would be fair to construe from that letter that the Government official says that they do not do the gauge work as accurately as the power company does?

Mr. STRECKFUS. Yes, sir.

Mr. TREADWAY. Well, you have no means of knowing on what basis or on what information the engineers have told you that there was no perceptible variation in the flow?

Mr. STRECKFUS. Only that when we went there to ask him to tell us about this thing, he said, "That is a surprise to me."

Mr. TREADWAY. Did you show him this blue print?

Mr. STRECKFUS. I told him about the blue print the day I got it. I said, "Did you know there was a fluctuation of 2 feet to 2.10 on September 9?" And he said "No; I do not know anything about that." And you see by his letter where he said there was no storage of water during the past three weeks, and he evidently had no record, because there was a shortage of practically 10 or 11 inches.

Mr. TREADWAY. Did you consider it was within the province of the engineers to have that information?

Mr. STRECKFUS. I figured they would be the ones in charge and especially after we wrote them and told them about the impounding of water.

Mr. BOOHER. What would the Government keep the engineer there all the time for if it was not for that purpose?

Mr. TREADWAY. Evidently to consult with the power people as near as we can make out from this testimony.

Mr. BOOHER. It seems to me we ought to do something in the way of aiding navigation.

Mr. SMALL. As I understand your statement it has a twofold purport—that water is stored above the dam during the dry water season and, second, that in the use of the water for generating power they use it irregularly during each period of 24 hours, so that more water comes down during a part of the day than at others?

Mr. STRECKFUS. Yes, sir; that is correct.

Mr. SMALL. And that causes these "waves," as you have described them, followed by no water coming over or through the dam.

Mr. STRECKFUS. Yes, sir.

Mr. BOOHER. Making low-water stages?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. Were you familiar with this river below the dam prior to the construction of the dam?

Mr. STRECKFUS. Yes, sir; I have been on the river for the past 15 years.

Mr. SMALL. To what extent was the stage of the river between Keokuk and Alton impaired during the dry season prior to the construction of the dam?

Mr. STRECKFUS. Well, we would not have had trouble, the way I gauge it by this data. All our trouble was below Keokuk. There was no trouble whatever from Keokuk to St. Paul, with one exception. Our boats after passing Keokuk would never have to ring a slow bell; and Col. Durham, at Rock Island, was on our boat when we had this trouble coming down the Mississippi, and he remarked himself "how fine this boat runs" from Davenport to Burlington, without ringing a slow bell, when this river used to be bad; and when we got below Keokuk we grounded, when he was on the boat, and we came into St. Louis 14 hours late.

Mr. SMALL. Was the section of the river below Keokuk difficult during very dry period prior to the construction of this dam?

Mr. STRECKFUS. Yes, sir; as much as above. There was one year, 1910, when the river all along was difficult, before the dam.

Mr. SMALL. Then, whatever difficulty there was in navigating the river, that was the same above Keokuk as below?

Mr. STRECKFUS. Yes, sir.

Mr. SMALL. You say there is substantially no difficulty above Keokuk, but all the difficulty is below?

Mr. STRECKFUS. Yes, sir; absolutely.

Mr. SMALL. Is that difficulty in navigation during the dry period caused by the operation of this dam?

Mr. STRECKFUS. Yes, sir; it is.

Mr. FREAR. What are the qualifications of Capt. Day as to his being an expert captain, or old-timer?

Mr. STRECKFUS. We consider him the best in the business.

Mr. FREAR. When we were on the boat we were grounded, as I now remember, 17 hours before we got to St. Louis, and we were grounded three or four times. That was in the month of August, 1916.

Mr. STRECKFUS. That was all below Keokuk?

Mr. FREAR. That was all below Keokuk, as I remember.

Mr. STRECKFUS. We have not had any trouble above, except on one occasion, and that was only a minor trouble at one place, causing a delay of about one and a half hours. Outside of that, we have had no trouble.

Mr. SMALL. You speak of the operation of the dam as causing the fluctuation in the rise and fall of the river below Keokuk. Has any other condition affected the river excepting the dam?

Mr. STRECKFUS. Only from filling in. I will give you the description given to me by Capt. Richtman, not in our employ. I asked him what he thought of the river. He had not been over it for a year below Keokuk Dam. He said, "I do not know how to describe it. It looks like it has been overrun by the flood, and has no particularly defined channel." He would not undertake to run the boat, but he had another pilot run it for him.

Mr. SMALL. That deposit of sedimentation causes bars?

Mr. STRECKFUS. They fill up or do not cut out, one or the other.

Mr. SMALL. Does that sedimentation come through or over the dam, or is it caused by this irregularity of water flow?

Mr. STRECKFUS. I think it is the irregular flow, which does not carry it on through. The Government has put up dams at different places to confine the river at those points, and that is supposed to do the scouring and cutting the channels, but below there the volume of water did not seem to be enough to carry that through. We had trouble with Upper Bloodsue and Fox Island crossing all during July and August and September, 1916. The Government engineers did not seem to know what to do with it. It did not seem to cut out or find its own way.

Mr. KENNEDY. I noticed in these petitions filed by Mr. Frear that you complain of the lighthouse. How does that affect the running of the boats?

Mr. STRECKFUS. The lighthouse system is up above also, and we have the same trouble all the way through to St. Paul—

Mr. KENNEDY (interrupting). I mean, are not part of your troubles, according to this petition, brought about by reason of the fact that the channel lights are not changed properly?

Mr. STRECKFUS. It is not on these places we grounded. It bothered us right from the start when it commenced getting flat. Our pilots knew about this being flat, and we reported it to Maj. Hoffman and Maj. Meigs, and his answer was "They will scour out." We asked him to put a dredge in there, because they were getting flat, and his reply was, "They will scour out." So, there was no question about lights or any apparatus like that going through those particular places.

Mr. KENNEDY. Is that in the particular reach of the river that Mr. Richards has charge of?

Mr. STRECKFUS. Part of it—about half and half. Maj. Meigs has charge from Bloodsue, Lone Tree, and Whitney crossings, and Mr.

Richards has charge of the reach from Taylors, Eagle Island, and Slimm Island.

Mr. GALLAGHER. Maj. Hoffman is a Rock Island engineer?

Mr. STRECKFUS. Yes, sir.

Mr. MEAD. We want to offer these logs, letters, blue print, and other data so as to get them in the record.

Mr. FREAR. Just put them in the record at the end of Mr. Streckfus's statement.

STATEMENT OF E. H. POLLARD, CITY ATTORNEY, FORT MADISON, IOWA.

Mr. KENNEDY. I would like to introduce to the gentlemen of the committee Mr. Pollard, from Fort Madison. He is the city attorney there.

Mr. POLLARD. I want to explain my reasons for being here before I attempt to make any statement. I did not know the nature of this hearing, and I did not hear anything about it until Saturday evening. I sent a telegram immediately upon hearing of the proposed hearing, because we are very much interested in the sewage situation at Fort Madison, stating that Fort Madison had a claim in the matter, which had been estimated by disinterested engineers at about \$90,000. The power company refused to settle on a legal technicality and offered \$15,000 as settlement. I requested advice from Mr. Rainey as to whether the city of Fort Madison should be represented at this hearing, and he said they should be represented. This is not directly connected with the matter of navigation, but it is directly and intimately connected with the height of the dam. If you desire to bear with me some 10 minutes, I promise I will not take more than that time. If you can not spare me that time I will be willing to waive in favor of the power company.

The situation briefly is this: Fort Madison is situated some 20 miles above Keokuk, where the dam is maintained. The river level was raised, and the sewers which dumped into the river at a level of 12 feet above low water naturally went too far below. Mr. Cooper, I am informed by various witnesses—I verified this by at least a dozen witnesses before I make the statement—stated that an intercepting sewer should be put in, meeting all our sewers coming toward the river, taking care of the water and dumping it in one general dumping place by means of this intercepting sewer, thereby impliedly at least admitting the moral liability of the power company to take care of the health and lives of the members of the community at Fort Madison. I am not claiming that this was stated in a form which could be accepted. The statement was merely made through the papers and otherwise before the decision was made that that would not be necessary. They changed the sewers from a height of 12 to 16 feet by flattening out the surface to a certain extent and consequently left it there.

What I have stated so far concerns only the upper third of the town. The western or lower two-thirds of the town is flat surface largely. The upper part has a very heavy fall. The raising of this water level has made for the lower two-thirds of the town a dumping station necessary, which is admitted both by the power company in

their conversations with us and stated by our own engineers. We only have one or two sewers in the lower two-thirds of the town, which is less sparsely inhabited, where the factories are located and where the entire development of the town has taken place. They claim no liability because of the fact that there is nothing there which the city owns which could be damaged, although, as I said, they do not seem to deny the moral liability, because the cost to the city is the same.

You may ask why we are appearing before the committee instead of seeking redress through a lawsuit. I can find no authority and various other lawyers in Fort Madison have looked it up and can find no authority on that point. I am almost certain the power companies have no authority to the contrary, because I have gone over the question with them, and the only things they have cited have been very collateral and not bearing upon the subject in any way, shape, or form, because you realize the difficulty of city litigation. There is the trouble of different views of the councilmen and others, and I thought it might possibly be remedied to suggest this matter to the committee which is meeting here and consequently me (my) telegrams.

The question has been gone into in regard to the height of the dam the Mississippi Power Co. has maintained. These facts are self-evident: Low water is 484 feet. The power company has the privilege from Congress of maintaining a crest dam at 30 to 35 feet; 35 plus 484 is 519. Later on under the act you will notice where it gives the engineer authority in regard to the impounding of water. But is it not a very obvious presumption that the power of these War Department engineers is necessarily limited to the regulation of the water within that height, to wit, 519 feet? The power company has built a dam—this will not be denied—at 514 feet, which is a height of 30 feet.

Mr. FREAR. Five hundred and fourteen what?

Mr. POLLARD. Six hundred and thirty feet above low-water mark. They built this dam with the solid masonry work which would naturally form a weir dam at 514 feet. On top of that they put a superstructure in the shape of arches. By means of regulation of these sluice gates they have maintained a crest of water there in the last year or two of between 523 and 524 and a fraction. This is merely an infringement upon the powers granted them by Congress, it seems to me. In a weir dam the crest of the dam, as defined by engineers, without any dispute, I am informed, is the height of the masonry work. In the case of a sluice dam or orifice dam, where they do not let the water go over the top, but let it go through passageways in the dam itself, we have various views which have been given the city. The preponderance of opinion of the engineers is that the height or crest of the dam in that case is the actual crest of the water. If that view be the correct one they have no authority whatsoever to grant them a single inch over 519.

Mr. FREAR. Five hundred and nineteen is how many feet?

Mr. POLLARD. Five hundred and nineteen is 30 feet.

With this in view, and not caring to go into a damage suit in which there was a very serious question of the city recovering through the injunction suit, we calculated how high water had been

maintained in the dam in the preparation for this suit. We employed, at the suggestion of one of the attorneys for the power company, some engineers. When they made their offer we said it was not enough, and they said, "How do you know?" They even mentioned the engineers we employed. They came down from our \$85,000 estimate to \$15,000. They said, "We have made our offer; the offer stands good; but that is all we can do for you." We presented this proposition of the dam to Burns & McDonnell, consulting engineers, of Kansas City, who are very well known, and asked them to tear it to pieces, if there was any way the power company could get out, giving a second theory as to what is the "crest of the dam." They replied in these words [reading]:

We will say, first, that there is apparently considerable difference in opinion among engineers as to what constitutes the crest of a dam of the type of the one under consideration. It would seem from the reading of the letter of Mr. Cooper addressed to the Secretary of War that what he had in mind at that time as the crest of the dam was the high-water level of the pool above the dam. It would also seem from the reply to that letter from the Chief of Engineers that the same idea was in the mind of the engineer.

However, the controversy that has since arisen makes it necessary that a more definite idea be fixed as to just what is meant by the crest. It occurs to us that this can be determined by the following analysis. We take it for granted that the Mississippi River Power Co. had the right to construct the dam whose crest would be 35 feet above low water, making its elevation 519.65.

Now, had the company elected to build a dam of the ordinary straight-crest type, having a top elevation of 519.65, we presume there never would have been any question raised as to whether or not such a dam came within the authority granted by Congress. We find by computation that the minimum flow of the river, viz, 20,000 cubic feet, flowing over a straight-crested dam 4,700 feet in length, would maintain a level of the pool above the dam at 1.2 feet above the crest of the dam, which would indicate that the ordinary minimum flow of the river would permit the company to maintain a water level of elevation 420.85. We also find by computation that the maximum flow of the river, viz, 260,000 cubic feet per second, when passing over the same hypothetical dam would maintain a level of the upper pool of 6½ feet above the crest of the dam, making its elevation at time of maximum flood flow 426.15.

Now, if this same line of analysis be applied to other stages of the river than maximum and minimum, it occurs to us that the permissible level of the upper pool can be fixed by computation for any particular volume of water flowing at any particular time. If this is the correct interpretation of the meaning of the grant of Congress—and we believe that it is—we could take the record of the flow of the river for any particular period, say during the last year, and compute the permissible height of the level above the dam for each day during the period. Such a computation would show the number of days during which the company has exceeded its rights in this regard. We have no record of the daily flow of the river, but we presume this information is available to you so that you can send us all of this data if desirable to extend the computations as above suggested.

It is our opinion that this would be the most logical method of defining what is meant by the crest of the dam, and we do not believe that testimony along this line can be successfully attacked. The fact is that the type of dam actually constructed for this company virtually has a variable crest subject to the control of the operators within certain limits. We would suggest that a table be prepared showing the daily results covering the last year or covering the full period for which the records can be obtained for this purpose. If you think best to have such a comparative table prepared, it will be necessary that we have the daily flow of the river and the daily record of the level of the water above the dam for the same period. We do not know just how this will work out but it is our surmise that it will be found that the water level is pretty generally higher than permitted by the authority of Congress for quite a portion of the time and perhaps is a little lower than might be permitted during

the occasional days of maximum flood. We do not feel certain that Mr. Everingham's contention that the crest of the dam can be construed to mean the same as the high water level above the dam is correct even though the reference first above cited in the correspondence between Mr. Cooper and the War Department might indicate that these gentlemen had such a definition in mind.

These data, gentlemen, were procured, through the War Department here by means of one of the Senators, and the data were sent to Burns & McDonnell for their means of computation. Their computation has not been completed, but it will be completed this week. They are all through every year except 1916 now, and have gone into 1916. It shows under this theory—which is not our original theory—that they have been maintaining a crest higher than authorized by Congress the major portion of the time. During flood times they have not, because then the level of the water flowing through those sluices is 6 feet or better, giving them a right to go up to 545.

As I say, we were preparing for an injunction suit when this came up, and I telephoned down upon the theory of saving the city the expense of a lawsuit. The matter has not been amicably adjusted with the power company. The remedy which has been suggested and which has been discussed is briefly this, gentlemen: These sluice gates are 11 feet. That makes 11 feet added to 30 feet, which is in reality 41 feet. If those gates were only 5 feet they could not possibly interfere. In other words, they could not possibly put it above the authorization of Congress, 5 feet, minus the amount of space taken by these arches which come in between the gates themselves.

If there is any point I have not made clear, I would like to have you ask questions in regard to them, gentlemen.

Mr. SMALL. The words of the statute are: "Authorizing the power company to erect, construct, operate, and maintain a dam with a crest with an elevation of 35 feet above standard low water." Is the elevation of standard low water a fixed point at Keokuk?

Mr. POLLARD. Yes, sir; they base that upon what they call "Memphis data." There is no dispute about that. They have stated themselves in their testimony that they have built the crest of this solid mason work at a 30-foot height or, in other words, 519 and a fraction.

Mr. SMALL. Thirty feet high above standard low water?

Mr. POLLARD. Yes, sir.

Mr. SMALL. And that is upon the assumption that the elevation of "standard low water" is known and established?

Mr. POLLARD. Yes, sir; we can establish what they have admitted to be low water in several court cases by sworn testimony.

Mr. SMALL. Who have admitted that?

Mr. POLLARD. The power company engineers.

Mr. SMALL. What do the United States Army engineers say about the fixation of standard low water?

Mr. POLLARD. They all use the Memphis data, if I am not mistaken, sir. Low water is 484 Memphis data.

Mr. SMALL. Then I understand there is no substantial controversy about where the low water is?

Mr. POLLARD. Yes, sir; that is my understanding. I might mention just one other fact, gentlemen: You will notice that the same time they say 30 to 35 feet in the same sentence they use this: "The generation and the use to be derived from the Des Moines Rapids on the Mississippi River." The Des Moines Rapids only run to Mont-

rose. Of course, the dam, as raised, goes above Burlington. I do not claim that is the measure. Thirty to thirty-five feet is the measurement of their power, but it shows what Congress had in mind. The Des Moines Rapids is even below 30 feet. It shows that they did not intend them to go away on beyond, up to 40 or 41 feet, which they have at present.

Mr. SMALL. There is no contention that Congress has authorized an increase of height at the crest there?

Mr. POLLARD. No, sir; the War Department engineers are the ones who have authorized that, and you will find in the statement of Mr. McKenzie in one place he says 523 feet, which is the height now permitted by the Government. He uses the "Government." I think it is in the same resolution which was read this morning. I will find it for you. Here is the statement of McKenzie, brigadier general, United States Army. In this paragraph it should be noted that the crest of the dam is elevation 523 as now stipulated by the Government. I am reading from page 69 of hearing before the Committee on Interstate and Foreign Commerce of the House of Representatives, dated January 17, 1913.

Mr. FREAR. Does he state why he quotes that figure?

Mr. POLLARD. Mr. Frear, under this provision granting to the War Department the direction and control of the discharge of the water it is evidently their contention that this act of Congress stipulating 30 to 35 feet crest can be disregarded.

Mr. FREAR. Can be enlarged to any amount?

Mr. POLLARD. Yes. I neglected to state this: One of the power company's attorneys engaged in conversation at Keokuk last week, I believe it was, or the week before last, in a suit by the Prairie Oil & Gas Co. against the power company, in which this argument came up between one of their attorneys and Judge Kappinger, of Kansas City. The power company, I am informed—Mr. Jeremiah Smith, of Boston, stated that they could maintain on top of this 514 dam a superstructure of any height whatsoever, provided they had the consent of the War Department. In other words, so far as I can see, the regulation of the Congress is null if that is the case.

Mr. SMALL. Just let me say this—if it is helpful, and it seems to me it is—the original act here, approved February 9, 1905, which I understand is the authority relied on for the construction of the dam—

Mr. POLLARD. Yes, sir; that is the one.

Mr. SMALL. Says "that the assent of Congress is given to erect and construct, operate, and maintain a dam with its crest at an elevation of from 30 to 35 feet above standard low water." Assuming that nothing is contained in the act which modifies that, that is a limitation upon the construction of that dam?

Mr. POLLARD. Yes, sir; in my opinion.

Mr. SMALL. Upon the height of it?

Mr. POLLARD. Yes, sir.

Mr. SMALL. That is a limitation of law?

Mr. POLLARD. Yes, sir.

Mr. SMALL. It is not left to the discretion of the engineers, but fixes the limit of the authority granted by Congress. Now, then, this language, "To maintain a dam with its crest at an elevation of

30 to 35 feet," does the word "crest" refer to the water or refer to the height of the dam?

Mr. POLLARD. There is the difficulty, and that is where there is some difference of opinion among engineers.

Mr. SMALL. Leaving out the question of engineers and considering it just a moment in the light of its construction as a matter of law, the language "operate and maintain a dam with its crest"—its crest necessarily refers to the dam; a "crest" means "top."

Mr. POLLARD. If you are merely referring to the top, I could not give the height of that, but it is away above that.

Mr. SMALL. Is there any other construction to be given to that?

Mr. POLLARD. There is, under engineering authority—

Mr. SMALL. I am not talking about "engineering authority." Engineers do not construe law.

Mr. POLLARD. I understand that, but we have to be governed by what is the general "terminology." The archways go away above 35 feet.

Mr. SMALL. You said the dam had a crest of 41 feet?

Mr. POLLARD. No; there is where they are maintaining the water—about 31 feet above low water.

Mr. SMALL. How high is this dam above standard low water? How high does the construction go which will prevent the flow of water?

Mr. POLLARD. The actual construction, as I understand it?

Mr. SMALL. Which prevents the flow of water?

Mr. POLLARD. First there is 30 feet of the mason work, and then on top of that the sluiceways 11 feet, which would make 11 feet on to 30 feet, or 41 feet.

Mr. SMALL. How high above the dam must the water get above standard low water before it begins to flow over the dam?

Mr. POLLARD. They raise the gates.

Mr. SMALL. I am not talking about the gates. I understand how they operate the dam. Supposing the gates are closed, how high must the water get above standard low water before it flows over the dam?

Mr. POLLARD. The actual height of the water going over would have to be higher than 41 feet, because that is the height of those sluice gates.

Mr. GALLAGHER. Does the river get that high?

Mr. POLLARD. I understand they are keeping it at an elevation of 524.

Mr. GALLAGHER. It never runs over the top?

Mr. POLLARD. The data which I am speaking of will all be prepared by the city by the end of this week. We will have then the elevation under the two different theories for every day of the year and how much it has been exceeding the authorized grant by Congress.

Mr. GALLAGHER. After Congress reserved the right to construct this dam the engineers then went ahead and gave permit to add an additional height in the shape of sluice gates; is that the way you conceive it? You mentioned the fact.

Mr. POLLARD. The sluice gates are a part of the dam.

Mr. GALLAGHER. Yes. Congress gave them a right to construct a dam 35 feet high, and then on top of that the engineers gave them a permit for an additional 11 feet.

Mr. POLLARD. I would construe any construction which permitted them to raise the water level would come within the limits of this act.

(Thereupon, at 4.50 o'clock p. m., the committee adjourned to meet tomorrow, Thursday, February 15, 1917, at 10 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Thursday, February 15, 1917.

The committee met at 10 o'clock a. m., Hon. John H. Small presiding.

Mr. SMALL. The committee will please come to order. Mr. Rainey, do you have any other matter to present this morning?

Mr. RAINEY. Mr. Everingham desires to present some matters to the committee.

Mr. SMALL. There was rather a tacit understanding that the other side would go ahead this morning.

Mr. RAINEY. Mr. Everingham wants to put something into the record. It won't take him long. He has come all the way from Fort Madison, Iowa.

Mr. SMALL. All right.

**STATEMENT OF MR. H. D. EVERINGHAM, OF FORT MADISON,
IOWA.**

Mr. EVERINGHAM. I think the whole difficulty here in regard to navigation gets down to the simple question that they do not live within the law that Congress has passed, and, if they did, the whole thing would be taken care of in a minute. The act of Congress, as passed, set a limit to the crest. That crest or height has been exceeded, and the water has been going up and down continually; and that is what has interfered with navigation.

Mr. RAINEY. Do you own land up there on the river, which enables you to arrive at your conclusions in this regard?

Mr. EVERINGHAM. I own land on both sides of the water, both in Illinois and Iowa, and have had considerable experience on the river, and I think I know all the conditions about the proposition, both above and down the river.

Mr. MEAD. You have had property submerged?

Mr. EVERINGHAM. I have had property submerged, yes; and I have had it damage, and have had property submerged that has not been damaged at all.

Mr. SMALL. That is above?

Mr. EVERINGHAM. That is above. Navigation of the river was affected by this crest of the dam. The crest of the dam is creating all the trouble with navigation.

Mr. FREAR. That is below?

Mr. EVERINGHAM. That is below. I do not know whether Capt. Streckfus has had difficulty above there, but a great many boats have

been forced to tie up on account of the excessive water in this lake above the dam, which is considerably larger than the act of Congress contemplated.

The act of Congress merely contemplated the erection of a dam for the generation of power from the Des Moines Rapids. Instead of conforming to the act of Congress, the plant added about 6 feet to the top of this dam, and this has affected the river as high as Burlington and possibly higher. The Des Moines Rapids end at Montrose, Iowa, about 11 miles above the dam; and this act of Congress, as passed, gave the right to raise the dam 35 feet above the standard low water level, to take the water over the rapids. They have raised water in the dam 41 feet. This is what has created all this disturbance. The river has fluctuated up above this limit set by Congress.

As that bill went to Congress, it was, I take it, before the committee; but the War Department reported out a substitute to take its place, and that substitute provided for a dam with a crest at an elevation of about 30 feet. That word "about" covered a multitude of sins, and the War Department specified that the dam should be erected from an elevation of 30 to 35 feet—the low and the high limits.

The power company, as a power proposition, would naturally want all the water they could get; consequently, they would keep as near that 35-foot level as they could. That would take care of the entire navigation proposition. The river would scour itself out.

Mr. FREAR. What do you mean by 35 feet?

Mr. EVERINGHAM. I mean that that would cover the Des Moines Rapids and would furnish excellent navigation all over, and would also comply with the law.

Mr. MEAD. Have you a remedy?

Mr. EVERINGHAM. I certainly have.

Mr. MEAD. What is it?

Mr. EVERINGHAM. That said Mississippi River Power Co. (Keokuk Dam) should live up to the exact letter of the original bill, No. 65, granting same; that no grants or permits be allowed for more than the 35 feet—

Mr. HUMPHREY (interposing). What do you mean by "original bill?"

Mr. EVERINGHAM. The one passed by Congress.

Mr. HUMPHREY. You spoke about some bill the War Department recommended.

Mr. EVERINGHAM. Yes; but I am talking about the original bill, No. 65.

Mr. HUMPHREY. All right. I wondered what you meant by the War Department passing a bill.

Mr. EVERINGHAM. I may have used that phrase. I am not a lawyer.

Mr. HUMPHREY. I understand.

Mr. EVERINGHAM (continuing). That no grants or permits be allowed for more than the 35 feet above low-water mark named therein, and in times of low water to aid navigation same should be lowered as much as possible, also letting the regular natural flow of

water through said dam at all times both day and night. In other words, there should be no regulation except the natural flow of that river.

Mr. HUMPHREY. There has been a great deal said about this irregular flow not keeping the river bed washed out, as it would if the flow was regular. It does not appeal to me, as a matter of fact. Suppose you keep a heavy head of water there, and then let it rush through. I think you would get as much cutting by that method as if you let it flow regularly.

Mr. EVERINGHAM. When the river is high there is a certain amount of silt always flowing in suspension through that river. When the river is low that silt sinks down and disappears. When the river is low, it cuts that out, and it never cuts it out if the silt is always held in suspension.

Mr. HUMPHREY. Suppose you get hydraulic pressure there, and let it go through there in a few minutes. What will be the effect of that?

Mr. EVERINGHAM. Won't that answer the purpose? Is that what you mean?

Mr. HUMPHREY. Yes; won't that do the work?

Mr. EVERINGHAM. It will, if you let it go steady. It will not cut it out if you let it in for a few minutes and then cut it off.

Mr. HUMPHREY. I am not an engineer, but I have some doubts about that.

Mr. EVERINGHAM. My contention is not based on theory, nor is it based on big steamboating. I had a small island in front of the island I had out there, and I had a great deal of difficulty in keeping the channel in; and I found that that was exactly what would clear out that channel.

Mr. FREAR. That is above the dam?

Mr. EVERINGHAM. That is above the dam, yes.

Mr. HUMPHREY. You have a fluctuation there of about 30 or 40 in the Mississippi River.

Mr. EVERINGHAM. Very seldom.

Mr. HUMPHREY. My recollection is that at Cairo it ranges about 35 feet.

Mr. EVERINGHAM. Cairo takes in both the Ohio and the Mississippi Rivers, and is below St. Louis Mo.

Mr. FREAR. What would be the fluctuation up there?

Mr. EVERINGHAM. The highest I have ever seen prior to the dam is in the neighborhood of 14 or 15 feet, which is exactly what we have had since the dam came.

Mr. SMALL. That is above standard low water?

Mr. EVERINGHAM. That is above standard low water, yes.

Mr. SWITZER. It seems to me now—it is 25 minutes after 10—that if we are going to close this hearing at 12 o'clock, we had better avoid repetition. This seems to me to be mere repetition. I have no complaint to make, but unless there is some end to this, we will not get anywhere. I think we had better hear the other side.

Mr. SMALL. Do you have anything else to say, Mr. Everingham?

Mr. EVERINGHAM. I have a couple of letters here to introduce.

Mr. SMALL. All right; without objection they will go in.

Mr. EVERINGHAM. On March 19, 1908, Mr. Cooper wrote a letter to Brig. Gen. Mackenzie, Chief of Engineers of the Army, and I will read just a paragraph or two to show what it is—

Mr. SMALL. All right.

Mr. EVERINGHAM (reading):

Referring again to my letter of March 10, 1908, and as a part thereof, I desire to submit for your consideration the following paragraphs as a substitution for the present conditions affecting the flow below the dam at Keokuk, Iowa.

Then he goes on and presents certain propositions, and the fourth paragraph is this:

* * * which is equivalent to drawing the pond 4 feet in aid of navigation during the time when the river might be lower than 20,000 cubic feet per second—

The river has never been below 20,000 cubic feet per second.

In this paragraph it should be noticed that the crest of the dam is elevation 523, as now stipulated by the Government.

In other words, Mr. Cooper calls attention to the fact that they are asking for more than the act of Congress grants.

Brig. Gen. MacKenzie takes that letter and attaches it to another letter, dated March 24, 1908, and headed "Memorandum for the Secretary of War," and asks that the War Department O. K. this proposition for the building of this dam. The matter goes to the War Department and comes back with the indorsement, under date of March 26, 1908, as follows: "Respectfully returned to the Chief of Engineers, concurring in his views as presented in the memorandum of the 24th instant."

Here is the chief engineer of the Mississippi River Power Co. presenting a petition to the War Department for an increase of 4 feet over the crest of the dam as allowed by the act of Congress. Here is the Chief of Engineers of the War Department presenting it to the Secretary of War and the O. K. on it. In other words, the War Department has usurped the rights of Congress and granted 4 feet more than the act of Congress authorizes.

Mr. HUMPHREY. I asked sometime previously the question if there was any question being raised as to the structure of this dam, and you said, "No; that there was no contention on your part that the dam in any way violated the act of Congress." Have you changed your attitude on that?

Mr. EVERINGHAM. The dam is built with a fluctuating crest. They can make that anywhere between 514 and 525.

Mr. FREAR. I understand you did claim that there was an 11-foot raise there on this superstructure. Is that right, Mr. Mead?

Mr. MEAD. Ask Mr. Everingham. Is that correct, Mr. Everingham? Mr. Fear asked the question. Is that correct?

Mr. EVERINGHAM. Yes. There is a superstructure 11 feet higher.

Mr. FREAR. I understand.

Mr. SMALL. Do you want those letters to go into the record?

Mr. EVERINGHAM. Yes.

Mr. SMALL. Without objection they will go in.

Mr. EVERINGHAM. They are photographic copies.

Mr. SMALL. All right.

(The matter referred to is as follows:)

HUGH L. COOPER, CONSULTING ENGINEER, 60 WALL STREET.

New York, March 19, 1908.

Gen. ALEX. MACKENZIE.

Chief of Engineers, United States Army.

Washington, D. C.

DEAR SIR: Referring again to my letter of March 10, 1908, and as a part thereof, I desire to submit for your consideration the following paragraphs as a substitution for the present conditions affecting the flow below the dam at Keokuk, Iowa.

These substitutions are by way of modifications of my letter of March 10, and are submitted with the hope that the proposals herein will meet the requirements of yourself and Col. Leach.

1. During the hours of daylight, during the navigation season, between sunrise and sunset, the power company shall not store water behind the dam.

2. During the navigation period and during the hours of darkness, between sunset and sunrise, the power company may store water behind the dam, provided that during at least two hours of such interval of darkness the power house shall pass water at not less than an average rate of 15,000 cubic feet per second, and during at least six other hours of period of darkness referred to in this paragraph the power house shall pass not less than an average rate of 10,000 cubic feet per second, and for the remaining hours of darkness the power house shall discharge not less than 5,000 cubic feet per second.

3. That when the flow of the river is not greater than 20,000 cubic feet per second, the power company shall pass through the dam during the daylight hours, in addition to the then flow of the river, an additional quantity of water equal to that stored during the next preceding hours of darkness from sunset to sunrise.

4. That at any future period if the flow in the Mississippi River should fall below 20,000 cubic feet per second and the power Company should not be passing water through the dam for power purposes equal to the total average discharge mentioned above, the power company shall be required to draw from its storage in aid of navigation, under stipulations to be specified from time to time by the engineer in charge of the district, that amount of storage that exists behind the dam above Elev. 519, which is equivalent to drawing the pond 4 feet in aid of navigation during the time when the river might be lower than 20,000 cubic feet per second. In this paragraph it should be noticed that the crest of the dam is Elev. 523 as now stipulated by the Government.

5. That at any future time after the beginning of the operation of these works the Government should be making improvements in the channel below the dam, the power company shall pay to the Government the sum of \$50,000 for such use as the Government sees fit in the regulation of the channel below the dam.

6. That under the foregoing arrangement the power company would have no responsibility, beyond the payment of \$50,000 herein specified, below the dam other than the specific stipulations required in the foregoing paragraphs.

7. That the power company will excavate a channel from the mouth of the new lock to the deep water below the Keokuk and Hamilton Bridge 7 feet deep below normal low water and having a width of 200 feet, the expense of this excavation to be borne by the power company and the work to be done at the time of the building of the lock.

The foregoing is our final appeal to you in these premises, and acknowledging the uniform courtesy and patience hitherto shown in many interviews with your department, and with the sincere belief that you will find the modifications herein petitioned for acceptable to all interests, I beg to remain,

Yours, very truly.

HUGH L. COOPER.

[First indorsement.]

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, March 25, 1908.

Respectfully submitted to the Secretary of War, inviting attention to the accompanying memorandum on the subject.

A. MACKENZIE,
Brig. Gen., Chief of Engineers U. S. Army.

IMPOUNDING OF WATER ABOVE KEOKUK DAM.

[Second indorsement.]

WAR DEPARTMENT, *March 26, 1908.*

Respectfully returned to the Chief of Engineers, concurring in his views as presented in memorandum of the 24th instant.

ROBERT SHAW OLIVER,
Assistant Secretary of War.

[Third indorsement.]

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, March 31, 1908.

Respectfully referred to Maj. C. S. Riché, Corps of Engineers, inviting attention to the action of the department shown by first and second indorsements hereon, and by the accompanying memorandum. (35003/128.)

By command of Brig. Gen. Mackenzie.

J. B. CAVANAUGH,
Major, Corps of Engineers.

[Fourth indorsement.]

UNITED STATES ENGINEER OFFICE,
Rock Island, Ill., April 13, 1908.

Respectfully returned to the Chief of Engineers, the necessary record having been made.

C. S. RICHÉ,
Major, Corps of Engineers.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, March 24, 1908.

Memorandum for the Secretary of War:

In the matter of the proposed modification of conditions to govern the operation of the plant of the Keokuk & Hamilton Water Power Co., at the Des Moines rapids of the Mississippi River, it is proposed by the company that, for the conditions approved by the Secretary of War under date of January 8, 1907, a copy of which is herewith, there shall be substituted conditions now presented by Mr. Hugh L. Cooper, hydraulic engineer of New York, and consulting engineer of the company.

The new conditions differ from the former ones mainly in a closer definition of the permissible daily fluctuations of flow at extreme low stages which it is now proposed to establish as follows:

"1. During the hours of daylight, during the navigation season, between sunrise and sunset, the power company shall not store water behind the dam.

"2. During the navigation period and during the hours of darkness, between sunset and sunrise, the power company may store water behind the dam, provided that during at least two hours of such interval of darkness the power house shall pass water at not less than an average rate of 15,000 cubic feet per second, and during at least six other hours of period of darkness referred to in this paragraph the power house shall pass not less than an average rate of 10,000 cubic feet per second, and for the remaining hours of darkness the power house shall discharge not less than 5,000 cubic feet per second.

"3. That when the flow of the river is not greater than 20,000 cubic feet per second, the power company shall pass through the dam during the daylight hours, in addition to the then flow of the river, an additional quantity of water equal to that stored during the next preceding hours of darkness from sunset to sunrise.

"4. That at any future period if the flow in the Mississippi River should fall below 20,000 cubic feet per second and the power company should not be passing water through the dam for power purposes equal to the total average discharge mentioned above, the power company shall be required to draw from its storage in aid of navigation, under stipulations to be specified from time to time by the engineer in charge of the district, that amount of storage that

exists behind the dam above elevation 519, which is equivalent to drawing the pond 4 feet in aid of navigation during the time when the river might be lower than 20,000 cubic feet per second. In this paragraph it should be noticed that the crest of the dam is elevation 523, as now stipulated by the Government.

"5. That at any future time after the beginning of the operation of these works the Government should be making improvements in the channel below the dam, the power company shall pay to the Government the sum of \$50,000 for such use as the Government sees fit in the regulation of the channel below the dam.

"6. That under the foregoing arrangement the power company would have no responsibility, beyond the payment of \$50,000 herein specified, below the dam other than the specific stipulations required in the foregoing paragraphs.

"7. That the power company will excavate a channel from the mouth of the new lock to the deep water below the Keokuk and Hamilton bridge 7 feet deep below normal low water and having a width of 200 feet, the expense of this excavation to be borne by the power company and the work to be done at the time of the building of the lock."

The first proposition of the company was for the privilege of complete interruption of flow during the night for the purpose of storing water to provide a greater development of power during the hours of load. This was summarily rejected by the Chief of Engineers as being obviously inimical to the interests of navigation. The right of fluctuation secured to the company by this new proposition is so greatly restricted that, in the opinion of the Chief of Engineers, it can not now be determined by the application of any hydraulic formula that there will be any appreciable fluctuation of stage which could be detrimental to navigation, and it is his opinion that any such fluctuation as is likely to occur will be restricted to periods of prolonged extreme low water, which the records of the river show is likely to occur not oftener than once in a period of 8 or 10 years. At such period it seems altogether probable that such fluctuations as occur will be above and below the mean or the level of flow which would be secured by the normal discharge of the river if the dam were absent, that these fluctuations will be diurnal, and that for any hour of any day in which there can possibly be a defect of depth there will be one or more hours in which there will be a corresponding excess of depth over that which could be guaranteed to navigation by the unrestricted flow of the river in its open channel.

Considering the slight possible effect, and the rare intervals at which they can possibly occur, and the present uncertainty as to whether they ever will occur, the Chief of Engineers is of the opinion that the interests of navigation on the Mississippi River will be adequately protected if these propositions receive the approval of the Secretary.

It will be noted, moreover, that the company obligates itself to contribute \$50,000 whenever required to aid in any work which the Government may find itself obliged to do below the dam for the purpose of increasing the depth in that portion of the river. This appears to the Chief of Engineers a substantial contribution to any expense which may be incurred.

Mr. Cooper advises the Chief of Engineers that the financing of the whole proposition is now at a crisis, and that it must stand or fall on the present decision. That is to say, if these propositions are accepted by the War Department, the works will be built by the power company, and if these propositions are not accepted by the War Department, the financing of the whole enterprise must fail and the works can not be built. Attention should therefore be invited to the very great advantages resulting to the navigation of the river by the construction of these works. These are:

First. The elimination of two locks in passing the Des Moines rapids, substituting one lock for the three.

Second. The substantial increase in dimensions of this lock, thus enabling commerce to be developed which, with the present works, would be impossible. This feature is very greatly emphasized, and its value to the river commerce is urged in the strongest terms by the leading representatives of the river interests, as evidenced by the stenographic reports of hearings on file in this office.

Third. The substitution for a canal trunk 11½ miles long, of limited width and depth, of a wide and deep pool 40 miles long, carrying a navigation of the best possible type from Keokuk practically to the city of Burlington.

Fourth. The reconstruction of the Government dry dock at Keokuk on presumably improved plans, and certainly substituting a new work for an old one. The money value of these betterments to navigation is placed by Mr. Cooper at \$3,500,000. The Chief of Engineers does not vouch for this estimate, but is prepared to say that the advantage to navigation from the construction of the dam and new lock is exceedingly great. It seems to be well established that these advantages to navigation must be sacrificed if the present propositions are unfavorably considered by the War Department.

A. MACKENZIE,

Brigadier General, Chief of Engineers, United States Army.

Mr. KENNEDY. If Mr. Everingham is through—

Mr. SMALL (interposing). Are you through?

Mr. EVERINGHAM. I am through. I think probably I am as well posted in regard to this matter as anyone you can catch anywhere, and I shall be very glad to answer any questions the members of the committee may desire to put to me upon the proposition.

Mr. BOOHER. This is a very important matter, and if these gentlemen have not had sufficient time to submit their whole case properly, I would be in favor of coming back here this afternoon.

Mr. SWITZER. Let them finish now. I am in favor of quitting at 12 o'clock.

Mr. BOOHER. What is your business, Mr. Everingham?

Mr. EVERINGHAM. I am in the wholesale seed business at Fort Madison, Iowa, and not connected with the dam or the steamer line.

Mr. FREAR. The suggestion comes to me that this proceeding is in the nature of a suit or something like that. We have the case made out here, then the answer comes in, and then each side presents the argument. Mr. Rainey has asked permission to present an argument which will rather clear the matter up for us. After the other side has presented their case both should be permitted to discuss briefly the matters involved and so clarify our minds upon it.

Mr. SWITZER. What we want is a witness now.

Mr. KENNEDY. Mr. C. W. Kellogg is here and would like to present the matter on behalf of the Mississippi River Power Co.

Mr. SMALL. All right.

STATEMENT OF MR. C. W. KELLOGG, MANAGER OF THE MISSISSIPPI RIVER POWER CO., KEOKUK, IOWA.

Mr. KELLOGG. I am manager of the Mississippi River Power Co. at Keokuk.

Mr. SMALL. You represent that company?

Mr. KELLOGG. Yes, sir.

Mr. Chairman and gentlemen of the committee, it appears to me that there have been made here specific charges against the Mississippi River Power Co., and I am going to try to keep as closely as possible to a discussion of those claims.

It has been stated, in the first place, that the Mississippi River Power Co. has injured navigation below the dam by the operation of this dam which is being passed upon, and has caused the difficulties which the Streckfus Line experienced in 1916 during the navigation season. In the second place, they state that this injury to navigation is due to the impounding of water at night by the Mississippi River

Power Co. in order to use it in the daytime for manufacturing power.

As I understand it, that is the whole question which is before the committee.

Incidentally, I think the impression has been given that the power company is unfriendly to navigation interests, and that it places its power requirements ahead of navigation.

I want to say most emphatically to this committee, and make the record very clear on that point, that the Mississippi River Power Co. takes navigation most seriously. We recognize fully that the interests of navigation are absolutely paramount on the Mississippi River. We realize that when Congress passed the act permitting the damming of the Mississippi River, the largest navigable stream in this country, that they were practically making the power company trustees for the proper handling of navigation on that river.

In general, there are a few statements I want to make as to the care we have used in handling this situation. Long before the Mississippi River Power Co. structure was completed, we had trained experts who spent years in the study of conditions of flow surrounding the Mississippi River and the methods of handling the flow of water through the plant. Mr. R. H. Bolster, our chief hydraulic engineer, has had eight years' experience with the United States Government. He was in the water resources branch of the United States Geological Survey. We spent about \$40,000 in studies and equipment to work out this situation.

I have one or two maps which I think may be of interest to the committee, as they show this situation. I will put these maps up here so the members of the committee may see them.

This is the area [indicating on map] which drains down and through the Mississippi River at Keokuk, 119,000 square miles—

Mr. SMALL (interposing). Begins where and ends where?

Mr. KELLOGG. From the western shores of Lake Superior in the north, practically to the Canadian line, almost to Lake Michigan on the east, and west into the Dakotas. This map shows the location of the Government gauging stations. We have dotted lines across the map showing the time interval required for water to pass from the upper river down to Keokuk. All that information is used in predicting water stages, which is very necessary in the intelligent handling of the stream.

Here is another map, which shows the various gauges which have been installed by the Mississippi River Power Co. for the purpose of studying the river conditions, so we can know at all times what is coming down the river. I will not attempt to insert this map in the record.

It shows a simple line from Rock Island through Keokuk, down somewhere about 20 miles below Louisiana. All of these small dotted points [indicating on map] show gauges installed by the Mississippi River Power Co. The dots are gauges installed by the United States Government. You will find that the Mississippi River Power Co. has a considerably larger number of gauges installed than the United States Government itself has.

With further reference to our attitude toward navigation, you were told yesterday by Capt. Streckfus and by Mr. Mead that when

any question came up regarding the navigation situation we spent time and money in working up every single record we had bearing upon the situation. Our policy has always been to court the fullest possible publicity.

In regard to our gauges, a statement was made yesterday by the Streckfus Line that when they went to the United States Government asking for information they were referred to the Mississippi River Power Co. The reason is obvious. The Mississippi River Power Co., in furtherance of its trusteeship of the navigation situation, has installed gauges to the number of many more than the United States Government itself has. We have always worked under the direct supervision of the Army Engineers, and they are familiar with our methods and instruments, and they know there is no more complete information available than we have. It was therefore a natural thing for the Streckfus Line to be referred to us. It was done for that reason, and not because the War Department had any reticence about furnishing the information.

There is a second reason why the Mississippi River Power Co. is very much interested in navigation. We have found, when it comes to locating industries near our power station, that while our rates are very low—we furnish it at less than one-half cent per kilowatt hour—that is not the primary inducement to industries; on the other hand, we frequently find, and do find in a majority of cases, that freight rates are more of a determining factor in locating industries than are power rates. We recognize fully that the Mississippi River is the greatest freight regulator in the central part of the continent, so our selfish interests would make us realize the value of satisfactory navigation upon the Mississippi River.

In regard to the second charge made against us—

Mr. E. TREADWAY (interposing). How about the claim made yesterday that practically all of your power is made for St. Louis, that all of it is sent some distance away? What difference would it make whether there were industries located near the river if that statement is correct?

Mr. KELLOGG. There is a good reason for it.

Mr. TREADWAY. Let us have it.

Mr. KELLOGG. The sale of power to public utilities in St. Louis—the contract of sale—was necessary in financing this project. We have so far sold power to all the public utilities we found we could sell to. We have a large amount of power still to sell. The only way we know of to sell that power is to sell it to industries which come in there, either through our inducement or for other reasons.

Mr. HUMPHREY. Then all your power is not sold?

Mr. KELLOGG. No; our maximum output to date is about 110,000 horsepower, while the maximum capacity of the present plant is 163,500 horsepower. It will be possible to increase that capacity quite considerably by putting in further water units. We already have 15 units installed, and we are prepared for the installing of an additional 15 units. That will increase our capacity very materially—it will double our capacity. Does that answer your question?

Mr. HUMPHREY. Yes.

Mr. KELLOGG. In regard to the second point—

Mr. TREADWAY (interposing). Did you state the quantity you sell at a distance?

Mr. KELLOGG. I did not.

Mr. TREADWAY. As I undersand it, your capacity is 163,000 horsepower?

Mr. KELLOGG. Yes, sir.

Mr. TREADWAY. Now, what part of that do you dispose of?

Mr. KELLOGG. About 60,000 horsepower goes to St. Louis. The balance is sold to other concerns.

Mr. BOOHER. Is there any difference between a kilowatt horsepower and an ordinary horsepower?

Mr. KELLOGG. Yes. A kilowatt is $1\frac{1}{3}$ horsepower. It is simply a larger unit.

Mr. BOOHER. It is a larger unit?

Mr. KELLOGG. Yes.

Mr. SMALL. What is the distance of transmission from your plant to St. Louis?

Mr. KELLOGG. It is 143 miles.

If the committee is interested, I would be glad to state briefly what our other customers are.

Mr. SMALL. Is there any loss in transmission?

Mr. KELLOGG. About 8 per cent loss.

Mr. HUMPHREY. If you will allow me to make a suggestion, I would mention that it seems to me that the charge that is made about impounding this water and about the irregularity of the flow is really the matter that is in issue here.

Mr. KELLOGG. Regarding that charge of storing water in the nighttime for use during the daytime, we have never availed ourselves of that privilege. It is a matter about which there has been a great deal of misapprehension. Congressman Humphrey yesterday stated the importance of tying in any variations in water level with some sort of proof as to what effect that would have. As to the further question of whether or not we have availed ourselves of this privilege, I will say that the United States Army engineers about a year ago were asked by the War Department to investigate this matter. They made a careful investigation and a written report, the date of which I have forgotten, but it was quite a full report, in which they found that we had not yet availed ourselves of the storage privilege, and we have not done so since the date of that report.

Mr. SWITZER. At any time, either day or night?

Mr. KELLOGG. That is right. Necessarily there had to be an initial storage of water to get the pond up to a certain height above the dam.

Mr. TREADWAY. When you use the word "privilege," what do you mean by that?

Mr. KELLOGG. I refer to the—

Mr. TREADWAY (interposing). To the original act?

Mr. KELLOGG. I refer to the agreement.

Mr. TREADWAY. Where do you consider you get that privilege from for impounding?

Mr. KELLOGG. I will tell you. I refer to the agreement between Mr. Cooper and the Army engineers in 1908 in regard to this subject, which has been referred to.

Mr. HUMPHREY. One thing I want to get into my mind more than anything else is this: I want to know whether or not you had been impounding the water and causing those fluctuations by storing the water in the night and using it in the daytime, in order to make these fluctuations, resulting in defective navigation.

Mr. KELLOGG. No, sir; I have records here to prove that.

Mr. FREAR. Then read that into the record about that privilege. Let's find out what that is.

Mr. KELLOGG. That is a printed record.

Mr. FREAR. That is what Mr. Treadway referred to—the agreement between Mr. Cooper and the Army engineers? What is that agreement?

Mr. KELLOGG. It is a memorandum for the Secretary of War, which was just handed to you by Mr. Everingham, dated March 24, 1908.

Mr. FREAR. That letter which Mr. Everingham handed in?

Mr. KELLOGG. Yes.

Mr. FREAR. Is that all?

Mr. KELLOGG. Yes.

Mr. FREAR. That is what I had reference to.

Mr. SWITZER. That is not an agreement.

Mr. KELLOGG. Not exactly an agreement; no.

Mr. HUMPHREY. You have not taken advantage of it?

Mr. KELLOGG. No, sir.

Mr. HUMPHREY. Then it is immaterial.

Mr. KELLOGG. We have not needed to take advantage of it.

I have here some data bearing out the point that sudden drops in the stage do not necessarily mean that anything has been done at the dam. I am making this point, because yesterday a great deal of emphasis was laid by Capt. Streckfus and Mr. Mead upon the sudden drops in stage that occurred at different points, according to observations and affidavits they presented. Now, gentlemen, sudden drops like that occur quite frequently in states of nature. I have a report made 17 years before the dam was completed, which shows a drop of 2½ feet down at Hannibal in 24 hours. Now, on August 7, of the same summer, there was a drop of 2.6 feet in the same year. On August 24 there was a drop of 2.2 feet. In other words, gentlemen, because the river suddenly drops below the dam, it does not prove that the gates have been manipulated or the flow of the river manipulated. Such drops are frequent in a state of nature.

Mr. BOOHER. What causes it to drop?

Mr. KELLOGG. Change in the flow.

Mr. BOOHER. Could that flow affect the river if there was no dam above it?

Mr. KELLOGG. It would in the pool.

Mr. BOOHER. Then what has caused this sudden drop; it was the dry weather, wasn't it?

Mr. KELLOGG. Yes, sir.

Mr. BOOHER. Now, dry weather would not cause that sudden drop below that dam every night and then cause it to suddenly rise in the morning, would it?

Mr. KELLOGG. Dry weather would not do that; no.

Mr. BOOHER. Then what would cause it? Would a sudden rise in the morning be caused by letting the water through the dam?

Mr. KELLOGG. I will come to that a little later.

Mr. BOOHER. I wish you would. Don't forget it.

Mr. KELLOGG. I have that matter in mind. In the first instance, we have no disposition to deny either the occurrence, location, or date of the various steamboat groundings which Capt. Streckfus has mentioned to you. We do deny that these difficulties were caused by anything done by the Mississippi River Power Co., and that is what I am going to try to prove to you.

Capt. Streckfus has stated as his theory that all delays were caused by a manipulation of water at the Keokuk Dam. That is not at all the case, as I understand it. I have been in charge of the power company there about two and one-half years. Until last August I never heard a complaint from the navigation interests. We never had a complaint from the time I took charge there until these people complained in regard to the difficulties had in the season of 1916. On account of knowing that the flow of the river, compared with previous years, during 1916 was fairly good, I was very much surprised at this complaint. It was on account of that that we went to the trouble of looking into the situation so carefully and got up these drawings, copies of which have been furnished to the Streckfus Line, and I also consulted the Government engineer at Keokuk, Mr. Montgomery Miggs, United States civil engineer, who has been there since 1883, and he, I thought, would be familiar with river conditions if anybody was. He accounted for the difficulties in navigation in the year 1916 as being undoubtedly caused by long-continued high water during the period immediately preceding this trouble in 1916. I have with me to-day the record upon that point, which I will not attempt to insert in the record because it is too lengthy, showing the daily flow of the Mississippi River at Keokuk from the year 1878 up to and including 1916. I find the following in regard to the flow of the river at Keokuk. I would like to explain for the information of the committee what the flow of the Mississippi River at Keokuk is. It is customary to express the flow of a river in cubic feet per second which passes down the river, frequently referred to as "second-feet."

Now, gentlemen, the natural flow of the Mississippi River at Keokuk is 50,000 second-feet. The low flow, or the flow at which the Mississippi River Power Co. must draw on its pond in aid of navigation, is 20,000 second-feet. The flood stage at Keokuk is, as I recall it, about 100,000 to 110,000 second-feet. The highest known flow at Keokuk is 362,000 second-feet. The records do not go back far enough to cover all these years. That is what might be called a more or less prehistoric flow. That was in 1851, before any definite records were available.

Mean daily flow in cubic feet per second of Mississippi River at Keokuk, Iowa, for 1911.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1	12,000	17,000	67,900	32,800	40,800	52,800	33,100	24,800	28,100	64,600	122,000	42,000
2	12,000	18,000	61,400	33,400	47,300	55,200	31,800	24,100	26,200	69,000	122,000	40,000
3	12,000	18,000	55,200	33,900	53,200	57,200	29,800	22,700	25,800	65,700	121,000	36,400
4	12,000	20,000	50,200	35,600	54,200	61,400	29,300	22,100	24,900	67,900	119,000	35,000
5	12,000	20,000	49,200	39,000	54,200	64,200	28,400	24,100	24,500	74,500	116,000	36,000
6	12,000	20,000	48,400	41,300	51,800	65,300	28,100	23,300	23,500	74,500	110,000	37,000
7	12,000	20,000	45,400	45,400	48,700	65,700	26,800	23,500	46,400	73,400	104,000	38,100
8	12,500	20,000	41,700	47,500	45,800	64,200	26,600	25,200	31,800	70,500	97,900	39,200
9	13,000	20,000	41,000	48,300	44,500	62,500	25,500	24,900	26,800	69,600	91,600	39,900
10	13,000	20,000	39,000	46,400	42,600	59,300	25,500	23,400	25,800	67,900	88,400	45,000
11	13,500	21,000	39,900	44,500	40,600	57,200	24,800	23,300	26,300	66,800	89,900	50,800
12	13,500	22,100	39,900	43,900	40,100	53,800	24,800	23,300	26,600	68,800	92,000	61,200
13	14,000	23,400	40,800	45,200	38,500	53,800	24,400	25,800	26,900	67,900	95,700	71,000
14	14,000	26,900	37,300	47,300	38,100	54,200	24,400	43,500	28,100	71,200	92,000	73,400
15	14,000	42,200	37,300	47,100	37,800	55,200	24,200	64,400	31,200	75,500	90,500	75,700
16	13,000	62,500	36,400	45,600	37,300	57,200	24,200	72,300	32,300	80,200	86,300	74,500
17	12,500	82,600	35,600	44,500	36,700	58,300	23,300	72,300	30,700	86,100	79,100	74,800
18	12,500	118,000	35,600	42,600	36,400	59,300	22,100	70,100	30,700	93,300	75,400	75,000
19	12,000	134,000	33,100	42,100	36,100	59,500	21,300	66,100	33,100	101,000	69,400	74,500
20	12,000	148,000	33,100	41,300	35,600	60,000	21,500	62,500	32,300	110,000	65,700	74,500
21	12,000	156,000	31,800	40,100	36,400	59,300	21,000	60,400	33,100	118,000	63,300	70,100
22	12,000	150,000	31,800	40,800	35,400	55,600	20,500	57,900	37,300	129,000	60,400	69,600
23	12,000	132,000	30,700	41,000	34,700	51,800	20,400	55,600	39,500	132,000	58,300	72,300
24	12,000	111,000	29,900	41,300	36,400	47,500	20,400	51,200	39,500	137,000	61,400	74,800
25	12,500	95,700	29,900	41,300	38,100	43,900	20,400	46,500	65,700	138,000	59,300	72,300
26	13,000	84,900	29,900	41,900	41,700	41,700	20,000	41,700	74,100	140,000	53,400	72,300
27	13,500	77,900	29,900	42,100	43,200	40,100	20,100	37,800	56,000	136,000	47,700	70,000
28	14,000	72,300	32,800	42,100	44,500	40,800	20,100	34,400	50,800	132,000	45,400	65,000
29	14,500	.....	31,500	42,100	45,800	38,100	21,400	32,700	74,500	127,000	42,000	60,000
30	15,000	.....	33,900	42,400	48,300	36,100	22,500	31,200	74,500	124,000	42,000	55,000
31	16,000	.....	33,400	.....	49,600	.....	23,900	29,200	.....	122,000	.....	50,000

Mean daily flow in cubic feet per second of Mississippi River at Keokuk, Iowa, for 1914.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1	16,000	25,100	27,000	55,000	51,500	65,000	87,500	60,000	35,000	56,500	46,500	31,500
2	17,500	30,900	26,000	57,000	53,000	65,500	85,000	57,000	37,000	55,500	45,000	32,000
3	18,600	32,800	26,000	52,500	54,500	65,500	83,000	52,000	41,500	54,500	44,000	32,000
4	16,400	22,300	27,500	53,000	56,000	66,500	82,500	49,000	44,000	54,000	43,000	31,000
5	18,400	25,500	32,000	51,000	58,000	65,000	82,000	46,000	44,000	53,000	42,000	30,000
6	17,900	22,000	28,000	53,000	61,000	67,500	83,000	44,000	44,000	51,000	41,500	29,000
7	18,900	20,100	30,000	53,500	65,000	70,000	85,000	42,500	46,500	50,000	41,000	28,500
8	21,600	16,200	29,500	50,500	67,500	73,000	86,000	41,000	52,000	50,000	40,500	29,500
9	21,200	17,300	28,000	51,000	69,000	73,500	88,000	40,000	53,000	49,000	39,500	30,000
10	18,100	15,600	29,000	51,000	71,500	71,000	94,000	38,500	52,500	51,500	39,000	30,000
11	15,600	16,400	29,000	52,000	76,000	70,500	97,000	37,000	47,500	52,000	38,500	29,500
12	16,400	23,300	27,500	53,000	81,000	72,000	100,000	36,000	42,500	53,000	37,500	29,000
13	16,000	18,100	28,000	54,000	87,000	76,000	106,000	35,000	39,000	56,000	36,500	26,000
14	16,200	21,100	34,000	53,500	93,000	77,000	108,000	34,000	41,500	59,500	35,500	17,100
15	18,500	18,600	42,000	51,500	91,000	79,000	108,000	33,000	45,000	54,500	35,000	14,000
16	18,100	17,500	36,000	51,000	90,000	81,000	107,500	32,500	48,500	54,500	34,500	12,100
17	23,500	19,300	35,000	48,500	89,000	84,000	108,500	32,500	64,500	54,000	34,000	11,500
18	23,500	23,500	34,000	47,500	87,500	88,000	106,000	32,500	83,500	54,000	34,000	12,400
19	24,000	20,000	37,000	47,000	84,500	93,500	105,500	32,500	88,000	51,500	33,500	12,300
20	29,500	19,300	37,000	46,500	81,500	99,500	105,000	32,500	81,000	55,500	31,500	14,300
21	26,500	21,600	37,000	46,000	79,000	105,000	103,000	32,500	74,500	56,000	31,000	15,100
22	20,500	22,600	37,000	45,500	73,000	107,000	98,000	32,500	71,500	56,000	30,500	15,400
23	21,000	19,500	37,000	43,000	69,000	112,000	92,000	35,000	69,000	56,000	29,500	16,300
24	21,000	20,400	36,500	41,500	67,000	116,000	86,000	34,000	67,000	54,500	29,000	16,300
25	21,000	20,600	37,000	42,500	65,500	111,000	82,500	33,500	65,000	53,000	28,000	17,500
26	21,500	19,000	36,500	44,000	64,000	105,000	78,500	33,000	64,000	53,500	27,000	17,600
27	23,500	21,200	35,500	45,000	61,500	99,500	76,000	32,500	63,500	51,000	26,500	17,700
28	29,000	22,300	35,000	47,500	59,500	94,000	74,000	32,000	62,000	49,500	26,500	18,900
29	33,500	.....	38,000	49,500	61,000	91,500	89,000	32,000	59,500	49,000	30,500	20,500
30	27,000	.....	18,000	51,500	63,500	90,000	86,000	32,500	57,500	43,000	31,000	20,900
31	26,500	.....	53,000	.....	65,000	.....	62,500	33,500	.....	47,000	.....	20,700

Mean daily flow in cubic feet per second of Mississippi River at Keokuk, Iowa, for 1916.

Day.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	35,200	93,000	72,000	173,000	171,500	115,000	94,000	61,500	32,500	43,000	42,500	40,500
2.....	39,000	79,000	70,000	176,000	177,500	115,000	90,000	60,000	32,500	43,000	43,000	39,000
3.....	41,300	79,000	66,500	169,500	183,000	117,500	88,000	57,000	32,500	43,000	43,000	39,000
4.....	46,800	80,000	61,500	161,000	188,500	119,500	83,000	55,000	32,500	43,000	43,500	39,000
5.....	50,000	75,000	58,000	150,500	190,000	124,000	79,000	52,000	35,500	43,000	40,500	38,000
6.....	50,500	63,500	56,500	141,000	187,000	133,500	76,000	50,500	42,000	42,000	40,000	37,000
7.....	50,600	60,500	55,500	137,000	190,000	151,500	74,000	50,000	45,000	41,000	40,500	38,000
8.....	46,500	58,000	53,500	133,000	195,000	158,000	73,500	48,000	43,500	40,500	44,500	39,000
9.....	44,500	54,500	48,500	124,000	196,000	158,500	71,500	46,000	40,000	40,000	41,000	38,000
10.....	46,000	52,000	48,500	122,000	192,500	161,000	71,000	46,000	38,500	39,500	40,000	37,500
11.....	45,500	50,000	47,000	123,000	187,500	161,500	72,000	54,000	39,500	38,000	42,000	36,000
12.....	42,700	51,000	49,000	126,500	182,500	162,000	73,000	50,500	40,000	37,000	42,500	35,000
13.....	37,000	47,000	53,000	137,500	183,000	160,500	74,000	52,500	40,500	37,000	43,000	30,500
14.....	35,400	45,500	53,500	145,500	181,000	157,000	75,500	49,000	39,500	37,000	42,000	22,300
15.....	33,600	45,000	53,000	153,000	177,500	154,000	76,500	48,500	38,000	38,000	42,500	19,400
16.....	32,900	44,000	45,500	160,000	172,500	151,500	79,000	45,000	38,000	38,000	43,500	15,100
17.....	33,000	46,000	47,500	166,000	166,000	148,000	80,000	42,000	38,000	38,000	44,000	14,300
18.....	31,000	48,000	48,000	171,000	155,000	145,000	80,500	41,000	38,000	37,000	42,500	16,400
19.....	26,300	52,000	46,000	173,000	150,000	141,500	82,000	40,500	38,000	37,000	43,500	18,000
20.....	30,600	62,500	50,500	173,500	143,000	140,500	81,500	40,000	39,000	37,000	45,500	15,600
21.....	56,000	58,000	57,000	173,500	135,000	139,000	79,500	39,500	39,500	36,500	45,500	14,900
22.....	72,000	66,000	58,000	170,000	138,000	132,500	82,000	39,500	39,500	37,000	47,000	14,600
23.....	85,500	68,500	63,000	167,500	136,000	129,000	81,500	38,000	39,000	37,500	45,500	16,500
24.....	89,000	77,500	65,000	165,000	146,000	125,000	80,000	37,000	38,500	37,000	44,000	19,000
25.....	94,000	80,500	66,000	163,500	136,500	121,000	78,000	35,500	38,000	40,000	43,000	20,700
26.....	101,000	76,000	84,000	161,000	130,500	116,000	76,000	34,500	38,500	41,000	42,000	22,300
27.....	138,000	70,000	118,000	162,000	136,000	110,000	74,500	33,500	39,000	42,500	43,500	23,700
28.....	129,000	70,000	145,000	165,000	129,000	105,000	72,000	32,500	39,500	42,000	42,500	25,500
29.....	126,500	70,000	171,000	168,000	121,500	100,000	69,500	32,500	40,500	42,500	41,000	26,200
30.....	121,000	.....	186,000	172,500	118,000	98,000	68,000	32,500	42,000	42,500	38,500	26,000
31.....	108,000	.....	190,000	.....	114,500	.....	63,500	32,500	.....	42,500	.....	27,100

With those figures in mind, during the year 1916, every day of the three months of April, May, and June, with the single exception of the last day of June, the river was equal to or above 100,000 second-feet, and for two months of that time it was very close to an average of 150,000 second-feet. During the month of July it decreased from 94,000 the first day of the month to 63,000 the last day of the month, decreasing somewhat more rapidly in August until, on August 28, the flow reached the lowest point during the summer of 1916, of 32,500 second-feet, an amount about 60 per cent larger than the United States Government Engineers say is a flow requiring assistance for navigation.

Mr. FREAR. Where were those measurements taken?

Mr. KELLOGG. In the old days they were taken at Nashville, 7 miles above where the dam now is.

Mr. FREAR. I mean now.

Mr. KELLOGG. At the dam.

Mr. FREAR. How could they be taken at the dam when you were holding water in there?

Mr. KELLOGG. The dam allows the water to pass through the spillways and the turbines. The system we use there is superior to the ordinary gauging. All these figures have been checked also from the same source as the original figures before the power company was there—that is, from the Government gauges up the river.

Mr. FREAR. Do your instruments at Keokuk measure the exact amount of water that flows into the lake 60 miles above?

Mr. KELLOGG. It measures the water that flows past our plant. That can be checked by the inflow above.

Mr. FREAR. The gates may be open, of course. How can you determine that?

Mr. KELLOGG. You determine it in this way—

Mr. FREAR. That is, what amount of water is flowing in? That is what I want to find out—what the exact stage of the water is.

Mr. KELLOGG. If the level of the pond is constant and there is no other inflow from the river above and no wind effect, then, by that very fact the exact natural flow of the river is being maintained. You will agree to that?

Mr. FREAR. I understand that is so.

Mr. KELLOGG. That is the effort we make. Going still farther back, and keeping in mind that figure of 32,500 second-feet as the minimum flow last summer. I find during 1914 the minimum flow occurred almost exactly the same date, August 27th and 28th and 29th, which was 32,000 second-feet, very slightly less than that for 1916, and there was no trouble with navigation. Why? Because during that year the flow preceding the navigation season was a very moderate amount, never going above 112,000 second-feet, whereas in 1916 it went up to 200,000 second-feet.

Mr. HUMPHREY. How do you claim that the large flow at that time affected navigation?

Mr. KELLOGG. I will explain it.

Mr. HUMPHREY. I wish you would.

Mr. KELLOGG. I got this explanation from Mr. Miggs, United States civil engineer, who has been at Keokuk for about 35 years. He told me that always high flows were accompanied by a deposit of silt or the formation of sand bars. When the water falls it takes quite an appreciable period to wash the sand bars down and get the river back to its natural channel. That was his explanation.

Mr. HUMPHREY. That is due to the fact that when you have high water it has a heavy amount of sediment?

Mr. KELLOGG. Partly that, and partly because it is so deep that it tends to fill up the bottom in places.

Mr. RAINEY. What year were you talking about last?

Mr. KELLOGG. The year 1914—two years prior to the one we have been discussing.

Mr. RAINEY. You say there were no complaints as far back as 1913?

Mr. KELLOGG. In 1913, I believe, there was some trouble in the navigation season, due to various causes; but they are more or less historical, so far as I am concerned. There was some dredging going on there in cutting out a channel for the lock, and all the machinery had not been received for the handling of the dam gates which regulate the flow, and some of the electrical connections between the gauges of the operating room in the power station had not been installed, so there was not, during the initial season—so I am told; I was not there at that time—the same regulation of flow as has been secured since that time.

Mr. HUMPHREY. During those days on which the steamboat company has complained the water was low and there was a fluctuation, what was being done at the dam in the way of impounding the water and making the change? What did you do at the dam to affect the flow of the water during those periods?

Mr. KELLOGG. We were attempting, and doing our best, as we always do, to keep the river flowing to its natural extent. I will get to that point in just a moment. There was one other point I want to discuss before I get to that.

Mr. HUMPHREY. All right.

Mr. KELLOGG. Following along this line or theory that the difficulty in 1916 was caused entirely by the long-continued period of extreme high water—

Mr. TREADWAY (interposing). Did Capt. Streckfus submit any testimony that there was any difficulty in navigation prior to 1916 of the same nature as he described in 1913?

Mr. MEAD. He said it had been happening for three years. He asked us why that was, and we said we had not gotten the data and figures until 1916.

Mr. SMALL. The only data were for 1916.

Mr. KELLOGG. I do not know when or how the Streckfus men talked to us. They never said a word to us.

Mr. RAINEY. I will say, in reply to that, that in 1914 there was a hearing before the Committee on Rules of the House of Representatives, at which I submitted a large number of letters from the captains and pilots operating on the river as far back as 1913, and those letters I have here and will put them in the record with the permission of the committee. They show the conditions in 1913 and subsequent years, and show them to be just as bad as they were in 1916. I called the attention of the Interstate and Foreign Commerce Committee to these interruptions on the floor of the House in 1916 and the statement was made there by Mr. Stephens, then a member of that committee, but not now a member of it, that the matter had been taken up by the committee with the Keokuk Dam Co. at that time and that they had assured them that remedies would be effected by which the conditions of which they complained would not in the future occur. So the dam company must have known about it prior to 1916.

Mr. KELLOGG. I think there was no difficulty prior to 1916, for the reasons I have just stated.

In further proof of what I have just said I would like to submit this: The Streckfus Co. had difficulty in 1916 with steamers going aground with stages of water 3 feet higher than where they had equal difficulty in 1911. The reason I take 1911 is twofold. In the first place, 1911 was a year of low water, of very low flow, much lower than in 1916, and it was also a year before the dam was completed; so it was supposed to represent the conditions existing in a state of nature.

During 1911 the minimum flow, which occurred on July 24 and 25, was 20,400 second-feet, about two-thirds or 60 per cent as large as it was last year.

Mr. MEAD. What was it in August? That was the time that all that trouble occurred.

Mr. KELLOGG. It varied in August. It was 72,000 second-feet. I am talking about the minimum flow. You will admit that July 24 is in the navigation season?

Mr. MEAD. Yes; and August and September.

Mr. KELLOGG. I am talking about 1911, when conditions were such as exist in a state of nature. I have before me a table, which we have based upon the Streckfus Co.'s printed time-table; and where we have found the time their boats went past certain points we have taken that and we have also taken the time their boats passed through the drawbridges, which was given us by the owners of the drawbridges, who are required to make a record of the name of the boat and the time it passes through. It is upon that information that we based these figures. I find that for the year 1911 the average delay per trip for the whole navigation season, between Keokuk and Quincy, was two hours. That boat was the steamer *St. Paul*, which I mentioned for 1911. In 1916 the same steamer, the steamer *St. Paul*, was subjected to an average delay of one-half hour per trip between Keokuk and Quincy.

Mr. SMALL. How far is Quincy below Keokuk?

Mr. KELLOGG. It is about 40 miles below Keokuk.

Mr. FREAR. What do you base that on? That is in August.

Mr. KELLOGG. No; that is the whole navigation season.

Mr. FREAR. How many trips did the boat make?

Mr. KELLOGG. In 1916?

Mr. FREAR. Yes.

Mr. KELLOGG. I have here six trips in August, both up and down, for the steamer *St. Paul*.

Mr. FREAR. I meant the steamer *St. Paul*. How many trips did that make?

Mr. KELLOGG. Six round trips.

Mr. FREAR. In one trip I know of, it was 17 hours late.

Mr. HUMPHREY. Maybe that made up for the rest of the season.

Mr. KELLOGG. There was no delay on the trip you mention, Mr. Frear.

Mr. FREAR. I was on that trip, and I know the boat was delayed 17 hours.

Mr. KELLOGG. I find there was no delay between Keokuk and Quincy on that trip.

Mr. FREAR. Was that below Keokuk, your record?

Mr. KELLOGG. Below Keokuk; yes.

Mr. FREAR. That is where we were on the sandbars, when we left Keokuk.

Mr. KELLOGG. That was before you got to Quincy?

Mr. FREAR. I do not know as to Quincy. After we left Keokuk was the time we were on the sandbars.

Mr. KELLOGG. Quincy is 40 miles below Keokuk.

Mr. FREAR. It was after we left Keokuk.

Mr. KELLOGG. It was probably after you left Hannibal.

Mr. SWITZER. Let the gentleman proceed.

Mr. FREAR. That is a very important and direct question.

Mr. SWITZER. Here is a gentleman who is trying to present his argument, or statement, to the committee, and here we have a Congressman, a member of the committee, interrupting him while he is trying to present something to the committee.

Mr. FREAR. I want to find out what it is based upon. We were in that case 17 hours late, and the delay occurred after we left Keokuk.

Mr. TREADWAY. This applies between Keokuk and Quincy.

Mr. KELLOGG. It was after you left Quincy, because, according to this record, there was no delay between Keokuk and Quincy.

Mr. FREAR. All I know is that it was after we left Keokuk.

Mr. BURGESS. With all these interruptions I think the gentlemen on the other side ought to have further time allotted to them.

Mr. KELLOGG. According to this table, which I have prepared and which is based, as I told you, upon data obtained from the company's timetable itself and from owners of these drawbridges, who are required to keep a record—there were more delays to boats above Keokuk than below Keokuk. Capt. Streckfus has stated to the committee that there was no trouble above the dam through any of these years; but the time of passing those points does not seem to bear that out. During 1916 the *St. Paul* lost an average time of four hours, according to their timetable, between Davenport and Keokuk, which is eight times as large as the loss between Keokuk and Quincy, and five or six times as large as between Quincy and Hannibal. I will submit this table to go into the record.

Mr. TREADWAY. That record need not necessarily apply to grounding. It might be due to the breaking down of machinery or anything else that would delay a boat. It is not a record of grounding, is it?

Mr. KELLOGG. No.

Mr. TREADWAY. I wanted that clear in my mind.

Mr. SMALL. Without objection the record will go in.

(The record referred to is as follows:)

Time (in hours) lost by Streckfus steamboats.

[Based on 1916 schedule. Minus sign indicates time gained.]

ST. PAUL.

Date of trip.	River flow (cubic feet per second).	Between Davenport and Keokuk.	Between Keokuk and Quincy.	Between Quincy and Hannibal.	Between Hannibal and Louisiana.
1911.					
June 7-8.....	64,000	3½	—	½	1½
June 10-12.....	57,000	5½	—	—	—
June 16-17.....	58,000	16½	—	—	1½
June 19-20.....	60,000	5½	—	—	—
June 25-26.....	42,000	6½	—	—	1½
June 28-30.....	41,000	12½	—	—1	—
July 4-5.....	28,400	18	—	—	2
July 7-9.....	26,600	6	5	—	—
July 13-15.....	24,400	8	—	—	1½
July 16-18.....	23,300	—	—	—	—
July 24-25.....	20,400	18	—	—	2
July 27-29.....	21,400	—	37½	—	1½
Aug. 3-4.....	22,100	—	—	—1	1
Aug. 7-9.....	25,200	10	—	—	—
Aug. 14-15.....	43,500	—	—	—	1
Aug. 17-19.....	72,000	10½	—	—	2
Aug. 24-25.....	46,500	18½	—1½	—	1
Aug. 27-29.....	34,400	10	—	—1	—
Sept. 3-4.....	24,900	5½	—1	—½	1
Average time lost per trip.....		10	2	—½	1
1916.					
July 17-18.....	90,000	3½	—	1	1½
July 21-22.....	90,000	3½	—	—½	—
July 27-28.....	80,000	5½	—	—	1
July 31-Aug. 1.....	70,000	4½	—	—½	—
Aug. 7-8.....	58,400	2½	—	—	4
Aug. 10-12.....	55,000	5	2½	2½	—
Aug. 16-17.....	46,300	4	—	—	1½
Aug. 20-21.....	41,300	4½	—	—	—
Aug. 26-27.....	36,200	5½	—	—	2½
Aug. 30-31.....	34,800	½	3½	3½	—
Average time lost per trip.....		4	½	½	1

¹ Date of Congressman Frear's trip.

Time (in hours) lost by Streckfus steamboats—Continued.

QUINCY.

1916.					
July 22-23.....	93,000	4½	—	—	1½
July 26-27.....	87,000	6	—	—	1½
Aug. 1-2.....	67,000	3½	—	—	1½
Aug. 5-6.....	60,400	4	—	—	2
Aug. 11-12.....	58,400	4½	—	—	1
Aug. 15-16.....	50,000	6½	—	—	1½
Aug. 21-22.....	38,700	6	—	—	1½
Aug. 25-27.....	36,700	6	5	—	5½
Sept. 1-2.....	34,800	9	2½	—	1½
Sept. 4-6.....	38,700	—	1	5½	1½
Average time lost per trip.....	—	5½	¾	¾	1½

Mr. FREAR. The log of the boat ought to show the cause of the delays.

Mr. KELLOGG. Yes. These boats had more delay above the dam than below the dam in 1916, and they had just as much trouble in 1916 with stages 3 feet higher than in 1911, as they did in the latter year, 1911.

Mr. TREADWAY. What do you mean by that—3 feet higher stages?

Mr. KELLOGG. That is the stage of the water, the actual level of the water below the dam.

Mr. TREADWAY. If a boat draws 4 feet of water and there are three or four in the stream all the time, do you mean to say that they have just as much trouble in grounding?

Mr. KELLOGG. Yes, sir. The formation of these sand bars by long-continued high water causes that trouble.

Mr. HUMPHREY. The bottom of the river is nearer the surface.

Mr. TREADWAY. In certain places.

Mr. HUMPHREY. In certain places, yes.

Mr. KELLOGG. There are further inconsistencies in this record. For example, referring to the *St. Paul's* schedule in 1916, and the trip of August 10 and 12, there were 55,000 second-feet flowing, and they lost 2½ hours between Keokuk and Quincy and 2½ hours between Quincy and Hannibal.

Mr. FREAR. What was the reason?

Mr. KELLOGG. We have no way of knowing what the reason was, from this information.

On August 26-27, with a flow of 36,200 second-feet, they lost no time between Keokuk and Quincy, nor between Quincy and Hannibal.

On August 30-31, with a flow of 34,800 second-feet, a height of as much as before, they lost 3½ hours between Keokuk and Quincy, and the same between Quincy and Hannibal.

Now, gentlemen, that is not consistent. That is bad navigation. It is due much more to that than it is to the fault of the dam. You can not use that argument when a boat will lose 7 hours on substantially the same flow as it had the day before, without any delay at all.

Mr. FREAR. Just one more question in regard to the storing of water. Do you allow the water to go through at the same rate day and night, through the dam?

Mr. KELLOGG. I am getting to that. I want to get through generally as regards these schedules that these boats made during the season of 1916, due to a bad season, so far as the flow is concerned.

Here is one more exhibit, based on Government records, which shows that the number of days during the navigation season, during every year from 1889 to 1916, both inclusive, 27 years—the number of days when the flow was above 40,000 second-feet, when it was between 35,000 and 40,000, and between 30,000 and 35,000, etc. According to that record, the average for the 27 years, there were 18 days when the flow was between 25,000 and 30,000. In 1916 there were no days when the flow was as low as that. The same record showing those 27 years shows that for 17 days the average was between 30,000 and 35,000. The same record shows an average, for two days in the year, below 20,000 second-feet. There were no such days in 1916. In other words, 1916 was a very fair navigation year on the Mississippi River.

Total duration of river stages and flow at Keokuk during navigation periods from 1889 to 1916.

Year.	For stages above 2.7 feet (flows above 40,000 foot- seconds).	For stages 2.1 to 2.7 feet (flows 35,000 to 40,000 foot- seconds).	For stages 1.4 to 2.1 feet (flows 30,000 to 35,000 foot- seconds).	For stages 0.7 to 1.4 feet (flows 25,000 to 30,000 foot- seconds).	For stages —0.2 to 0.7 foot (flows 20,000 to 25,000 foot- seconds).	For stages below —0.2 foot (flows below 20,000 foot- seconds).
	Days.	Days.	Days.	Days.	Days.	Days.
1889.....	120	9	17	57	26	.....
1890.....	181	34	14	.....	.....	.....
1891.....	106	8	10	30	63	12
1892.....	173	14	23	19	.....	.....
1893.....	122	4	8	66	29	.....
1894.....	99	3	14	29	50	34
1895.....	67	24	47	28	63	.....
1896.....	104	21	39	29	36	.....
1897.....	156	9	37	27	.....	.....
1898.....	123	13	31	19	43	.....
1899.....	138	40	18	33	.....	.....
1900.....	175	13	23	18	.....	.....
1901.....	128	23	18	42	18	.....
1902.....	191	14	19	5	.....	.....
1903.....	229	.....	.....	.....	.....	.....
1904.....	190	19	20	.....	.....	.....
1905.....	229	.....	.....	.....	.....	.....
1906.....	229	.....	.....	.....	.....	.....
1907.....	222	7	.....	.....	.....	.....
1908.....	157	3	21	48	.....	.....
1909.....	185	20	24	.....	.....	.....
1910.....	77	6	10	25	94	17
1911.....	99	17	9	11	32	.....
1912.....	191	35	3	.....	.....	.....
1913.....	142	43	35	9	.....	.....
1914.....	197	15	17	.....	.....	.....
1915.....	229	.....	.....	.....	.....	.....
Average for 27 years.....	158	15	17	18	17	2
Worst year.....	67	43	47	66	94	34
1916.....	142	5	6	.....	.....	.....

Mr. BOOHER. That being true, how can you explain the stopping and the grounding of these boats?

Mr. KELLOGG. I can not explain it except by the formation of those sand bars by long-continued high water in the spring.

Mr. BOOHER. The river has been navigated from the time of high water up to August, and then the boats do not ground, except when at night the water would be low, and the water in the morning would rise and the boats would go off.

Mr. KELLOGG. There was no storage of water.

Mr. BOOHER. How do you explain that one proposition?

Mr. FREAR. Why haven't they grounded above?

Mr. KELLOGG. They did ground above.

Mr. FREAR. I gave you an illustration of one case where I know they did not. Why didn't the boat ground above, instead of below the dam, in that case?

Mr. KELLOGG. In that case, I do not know.

Mr. BOOHER. You will remember that Capt. Streckfus told about the grounding of boats below the dam; and he said they would ground at night, and then in the morning when the water would come up the boats could get off those bars. How do you account for that?

Mr. SMALL. He said, due to the fluctuations in the flow of water.

Mr. KELLOGG. There have been fluctuations. I am coming to that. That is the next part of what I have to discuss.

Mr. SMALL. I think we will save time if you will let him complete his line of argument.

Mr. KELLOGG. I have completed that.

The next matter is the matter of fluctuations. We have not been doing any storing of water during the nighttime for use in the daytime, and we have done no storing except the initial impounding, in order to raise our pond up in creating the pond.

Mr. HUMPHREY. Since you attained the present level, you have held it at that level, and have not by storage caused any fluctuation? You had to have that initial storage; but after that, after you had that initial storage, you held it at one point there, and the flow of the river has been the natural flow?

Mr. KELLOGG. We have come as close to that as we could.

Mr. HUMPHREY. You had to impound that water?

Mr. KELLOGG. It is impounded.

Mr. HUMPHREY. Suppose it is a dry season?

Mr. GALLAGHER. Mr. Humphrey, it would probably run over if the dam is full.

Mr. HUMPHREY. He speaks about the initial impounding of that water and the initial level of that pond. Now, what I want to know is this: When you constructed the dam, you filled it up. Was that the initial impounding?

Mr. KELLOGG. Yes. It was raised in stages from time to time, first to one level and then to a higher level, and so on.

Now, gentlemen, I have here a record—it is the same record that we presented to the Streckfus Line—which we got up, showing the actual stages of the river during navigation season last year. This record runs from July through to the 30th of September.

Mr. SMALL. 1916?

Mr. KELLOGG. Yes; I will not start at the beginning of that, but the records show that on July 22 the flow of the Mississippi River was 81,500 second-feet, a very large flow, about four times as much as what is called low stage, and about eight times as much as the lowest known stage. During the latter part of July, beginning, to be exact, on July 30, we wished to raise our pond, to increase the height of our pond. At that time the flow of the river was very ample. We requested the United States officials for permission to do that, which they gave us, and from July 30 to August 6 the pond level was increased one-half a foot. After that time, throughout the

rest of the navigation season, the pond was increased again from the 17th to the 19th of August, two-tenths of a foot.

Mr. FREAR. How would that be increased?

Mr. KELLOGG. That is by impounding the water.

Mr. FREAR. By shutting off the variation of the water that would otherwise pass through?

Mr. KELLOGG. Yes; it is a fact that the actual level of the water below the dam is subject to variations all the time, from hour to hour—slight variations. I do not know whether you can see the irregular line that runs along this map [indicating on map], but that is the actual level, from moment to moment, from hour to hour.

Mr. SMALL. What causes that fluctuation?

Mr. KELLOGG. Below the dam?

Mr. SMALL. Yes.

Mr. HUMPHREY. What is the extreme? That is what I want to know.

Mr. KELLOGG. I will tell you. We worked this diagram up, giving the level at the lower lock, at Quincy, and at Hannibal. We have crossed these curves, showing where the Streckfus Steamboat Co.'s boats were at these various stage crossings, and, according to this record, which is based upon the most accurate information obtainable anywhere, it is true that in the summer of 1916 there was one time when the stage of the water was 0.15 of a foot (2 inches) lower than the natural stage, on account of the variation at the dam. The reason for that I will explain in detail in a moment, when I come to explain the great difficulties in arriving at mathematical exactness in handling the flow of the water. This 2 inches difference, which we admit we produced—inadvertently, but we did produce it—below the natural stage, looks to me pretty small, because the actual stages were about 3 feet higher than stages these steamers have been able to navigate in previous years.

Mr. HUMPHREY. That is the highest variation you caused?

Mr. KELLOGG. Yes.

Mr. FREAR. Did you let out the water at the time the Mississippi River Commission's boat was there?

Mr. KELLOGG. That is true, yes.

Mr. FREAR. What was the fluctuation then?

Mr. KELLOGG. It was 2.8 feet.

Mr. FREAR. What was the purpose of letting it out at that time?

Mr. KELLOGG. It was done to get the Mississippi River Commission's boat across the Upper Bludsoe Bar. We received orders by telephone from Mr. Miggs to open the gates to let down this wave of water to carry the Mississippi River Commission's boat down stream.

Mr. FREAR. What was the draft of that boat?

Mr. KELLOGG. I do not know. It has a little bit higher draft than most of the river boats. That is the impression I had.

Mr. SMALL. What date was that?

Mr. KELLOGG. November 10, as stated here. It was after the navigation season.

Mr. FREAR. They demanded that the water should be let out?

Mr. KELLOGG. It was ordered by the War Department officials. Under the orders of the War Department.

Mr. SMALL. You referred to the stages of the water. What are those stages based upon?

Mr. KELLOGG. On altitudes of the water surface.

Mr. SMALL. So many feet below or above?

Mr. KELLOGG. When you say 3-foot stage, it means 3 feet above standard low water.

Mr. SMALL. And when you say 5-foot stage, that means 5 feet above standard low water?

Mr. KELLOGG. Yes.

Mr. SMALL. Is the standard low water at Keokuk a well-known point?

Mr. KELLOGG. Yes. The lower lock is 484.65 feet above the sea level, according to what is called the Memphis datum of the United States Government.

Mr. SMALL. You referred to the "navigation season." What do you mean by that?

Mr. KELLOGG. It is based upon the orders of the War Department, which open the official navigation season. Around Keokuk it is about May 15 to November 15.

Mr. SMALL. Does that have reference to the temperature, because the river is frozen over?

Mr. KELLOGG. Only in a general way. As a practical matter the river can be navigated in the fall until it freezes over and also in the spring as soon as the ice is broken up and goes out. The "official" navigation season is opened, however, when the Government officials put out their buoys and their lighthouses, etc. In other words, when navigation is officially declared open.

Mr. SMALL. That is an arbitrary period fixed by the War Department?

Mr. KELLOGG. That is my understanding. I do not speak as an expert on that.

Mr. FREAR. You spoke about the lower lock. Is there another lock there?

Mr. KELLOGG. That is, the lower end of the lock.

Mr. FREAR. There is only one lock?

Mr. KELLOGG. Yes. The reason it was used is this: Before the Mississippi River Power Co. came there were a lower lock, a middle lock, and an upper lock. The old stone bullnose of the old lower lock was left in as a matter of permanent record, and I think that expression "lower lock" came to exist in that way.

Mr. SMALL. As a matter of fact, there is only one lock there now?

Mr. KELLOGG. Yes.

Mr. TREADWAY. There was some testimony yesterday relative to your gauges being larger and more accurate than the Government ones. That is made up from the Government gauges below Keokuk. isn't it?

Mr. KELLOGG. Yes, sir.

Mr. TREADWAY. Do you consider the Government gauges sufficiently accurate?

Mr. KELLOGG. They are not as sensitive and do not show any slight variations quite as quickly, but they are accurate. They have been the basis of all past records of the flow of the river.

You will recollect a gentleman yesterday—and I just mention this because it shows how easy it is for persons in trouble to misunder-

stand the source of their trouble—in discussing this matter, brought out the fact that one point in Capt. Streckfus's affidavit was in regard to the steamboats *Quincy* and *Dubuque* meeting on a sand bar. I have here this diagram—which is just the same as the other, with the exception that this section of it covers the period from August 19 to 28—which shows that when these two boats met on the sand bar the actual stage at that point was one-tenth of a foot (about an inch) above the natural stage. In other words, gentlemen, you will admit it is naturally human for anyone who gets into trouble in the Mississippi River to accuse the Keokuk Dam. I am not saying this to cast aspersions on the Streckfus Line, but the records will show that these boats have always been going aground in dry weather or when the river was low. It has happened year after year. Never before has there been any good, concrete cause to attribute it to. It is a matter of difficulty in navigation. This matter of impounding water in storage is a matter which is subject to exact mathematical demonstration.

Mr. FREAR. Do you hold up this water at times and then let it out?

Mr. KELLOGG. We never did anything like that, to aid or interfere with the Mississippi River boats, on our own volition.

Mr. FREAR. Do you hold it up during the day?

Mr. KELLOGG. No.

Mr. FREAR. I want to get that clear.

Mr. KELLOGG. That will be the next thing I will take up, and my last.

Mr. FREAR. That bears upon this very question.

Mr. KELLOGG. The year 1916 is only one of many years in which this situation is confronted. As a matter of fact, we went ahead last year and furnished all these records, clearly and completely, to the Streckfus Steamboat Lines, although we knew they would probably file a claim against us on account of it. They have filed suit for \$50,000, which is coming up in the Federal court and is set for March 12, of this year.

Mr. FREAR. What kind of a case is that?

Mr. KELLOGG. It is a damage suit brought in the amount of \$50,000 by the Streckfus Steamboat Line against the Mississippi River Power Co., for difficulties they encountered in the year 1916 in the navigation of the Mississippi River. The case will come up for trial on March 12, before the Federal court at Quincy, Ill. That is only a side issue. The point is that we want to settle this matter satisfactorily for all time. It seems to me that it is only fair to the Mississippi River Power Co. and to the United States Government and this committee for some sort of satisfactory settlement to be made to really handle this situation. If there is any human way we can improve on the method we are employing in handling that plant, we want to find that out and to adopt it. I will take a little bit of your time to explain, as concisely as possible, just how we are running the water from the Mississippi River. I have some blue prints with me—a sort of diagram. I will hand them around to members of the committee, so that they can follow me in my remarks.

You have before you, gentlemen, a blueprint of a sample daily record, such as is kept by the system operator of the Mississippi River Power Co., the man who controls all of the switching, opening,

and closing of the gates, throwing in and off the turbines, and who has charge of all the physical operations of the system. You will note it is divided into a 24-hour day.

Now, take curve "A." These are kept in the form of curves and this diagram forms a simple picture which he has before him and which shows the load in kilowatts. It starts off at midnight with 33,000 kilowatts and then drops down toward the small hours of the night to 17,000 kilowatts; then it jumps up in the morning and drops down toward noon; and the "peak load," so-called, comes at 6 o'clock in the evening, and on that day it was at that hour 63,500 kilowatts, which is approximately 85,000 horsepower, 1 kilowatt being equal to about $1\frac{1}{3}$ horsepower. The dotted line there [indicating on map] shows the number of turbines.

Now, curve "B" shows the level of the pond at Fort Madison, which is 22 miles above Keokuk.

Curve "C" is simply the same thing, with an interval between for correction.

Curve "D" shows the elevations of the water at the dam; that is, what we call our pond level. The figures above that line show the hundredths of a foot above 523.

Mr. FREAR. What do you mean by that?

Mr. KELLOGG. That is to say, 523.85 feet. That is shown on the right-hand side. Each interval is a tenth there. You will note the pond dropped along toward the afternoon. I will come back to that later and explain how that happened. We chose this day to show some difficulties that occurred.

Mr. HUMPHREY. That shows elevation at 0.83 and 0.84, etc.?

Mr. KELLOGG. Yes; those are hundredths of a foot above 523.

Mr. HUMPHREY. The greatest fluctuation shown is 99. Now, what does that mean, in inches—how great a fluctuation that day?

Mr. KELLOGG. It goes from 0.72 up to 0.99. That is 3 inches or a quarter of a foot.

Mr. FREAR. What is that 523 feet—dead low water?

Mr. KELLOGG. Four hundred and eighty-five feet is standard low water at the dam. That is, 523 is 38 feet above standard low water.

That was an enormous fluctuation. I want to explain how that happened as well as how this system operator runs this system.

Mr. FREAR. Is that an unusual fluctuation? You say it is enormous.

Mr. KELLOGG. It is very unusual. A variation of 0.05 foot is about the maximum for a day.

Mr. RAINEY. How much would that be below the dam?

Mr. KELLOGG. That would depend on the height of the river.

Mr. RAINEY. At this stage this date?

Mr. KELLOGG. At the stage this date, October 16, 1916, the flow was 38,000 second-feet. There is a curve here [indicating on blue print] which shows the variation. Now, one-tenth of a foot drop in the pond, with a flow of 38,000 second-feet, would correspond to five-tenths at the lower lock, but that much drop did not occur. I will show you the complications of this thing. If you will drop down to curve "G" at the bottom of the sheet, you will see that that shows the number of gates on the dam which are open. Before we get to that, I want to explain about these gates.

The crest of the dam, which is of solid concrete, is at a level of 514 feet above the sea level and 29 feet above the standard low water.

The pond level was at 524 feet, so there was approximately a 10-foot depth of water going over these spillways. These gates are 32 feet wide and 11 feet high; so a cross section of the volume of water going through one of those gates was 30 feet wide and 10 feet deep—300 square feet of cross section of water plunged down through one gate.

Going back to that curve again, you will notice that at midnight there was a load of 33,000 kilowatts on the station, and just as soon as that dropped off, the system operator had a gate opened half way. At 1 o'clock he opened it the rest of the way, and there were eight gates open at 5 o'clock in the morning.

Mr. FREAR. Whereabouts are you reading now?

Mr. KELLOGG. It is on curve "G." There were eight gates fully opened around 5 o'clock and between 1 and 5 o'clock. That was when the load on the power-house was low. In other words, when there is not much power, the system operator has these gates open so as to spill that water away and so equalize the flow.

Now, gentlemen, if you will come back to curve "E," you will see that by this manipulation he can keep a constant flow in the river below.

Mr. HUMPHREY. Can you state why there was a fluctuation above that and not below?

Mr. KELLOGG. There was no fluctuation at that time. The fluctuation above did not occur until 8 o'clock the next morning.

You will notice just as soon as the load is put on it goes up on curve A in the morning, when people are waking up and the cars starting and so on, and business begins, more water is going through the turbines, and consequently less has to be spilled over the spillways.

If we were storing water, what the system operator would have done would be to leave these gates shut, run his pond away up, and use the water next day; but he did not do that. You will find that by 7 o'clock in the evening of the next day he had only one gate open on the dam. In other words, this thing is being followed with the greatest care every hour. These gate openings can be supplied with 10-minute periods.

Mr. HUMPHREY. I understand what you do is that during certain hours of the day when you require less water the same amount of water goes through the dam, but is not used through the turbines, and when the time comes that you need more power you use the same flow, but you turn the greater portion of it through the power wheels?

Mr. KELLOGG. Precisely. It all goes down the river.

I have here a rough diagram of the situation.

Mr. SMALL. Is that sheet typical of your daily operations?

Mr. KELLOGG. It is typical, except it is very difficult to handle. I am not quite through with it. I want to explain that one point about the water coming through. Here is the main dam [indicating on diagram]. By the way, we have a dam which if put in Pennsylvania Avenue would run from the Willard Hotel up to the Capitol, and be as high to the top of the superstructure as a five-story building.

When these spillways are open the water goes down from the point above in the river over the spillway. When these generators in the power house are being used the water goes down through here [indicating] and out through the generators, and it gets into the lower

river just as surely and effectively through the generators as it does across the top of the dam.

While I am on that subject, I may say that this illustrates the necessity for these sluice gates on the dam. If we did not have those gates on the dam we could not do anything for navigation. Every time the river came up there would be a mad rush of water down there; there would be an enormous rise above the dam, and every time the water dropped it would be impossible for us to keep anything like a constant flow below, because the requirements of power being variable would vary the stream tremendously, whereas by these regulating gates we can, unless prevented by causes beyond our control, like wind, keep a perfectly level stream.

Going back to our curve, you will notice curve "F"—it is not a curve; it is simply a lot of figures, giving the velocity of the wind at each hour during the day, and you will notice that a 6 o'clock in the evening the wind was 13 miles an hour from the southwest, which would tend to blow back the waters of the lake. In other words, all through the afternoon there was a pretty strong breeze, getting as high at 2 o'clock as 20 miles an hour from the southwest, and that therefore the pond level (which you have all noticed dropped down from 0.84 to 0.72 foot) was not caused by water being drawn out of the pond but by the wind blowing back the surface of the pond, these gauges being right behind the dam and the level being taken at that point; and consequently the system operator, realizing that, did not allow himself to get stampeded by that drop in the pond, and during all that time the lower lock showed a very slight variation and dropped 0.15 foot below natural.

Notice that at 7 o'clock [indicating] the wind switched around to the northwest, and at 8 o'clock was blowing 32 miles an hour from the north, so that big drop of pond level was entirely due to the wind, because during that same period the lower lock level was rising. If he had been impounding water, as that increase in the pond level would have indicated to be the case, the lower lock level would not have fallen—it was rising.

That illustrates some of the great difficulties which we experience in trying to handle that situation here and maintain mathematically accurate discharges below the dam the same as those above.

On that particular date, when there was a fluctuation at Keokuk which caused 0.15 of a foot—that is, 2 inches—of decrease stage for Capt. Streckfus's boat, we had very much the same situation. I have with me diagrams similar to this day for about three months, and that date when this fluctuation occurred beginning on August 22 early in the morning, we had a wind of 38 miles an hour from the northwest, which caused a very rapid ponding, and which made it impossible for the system operator to know exactly how much of this effect of increased pond level was due to the wind and how much was due to change in the river flow. He had during that day general instructions that the river was slowly falling, which was true at that time, and, with those instructions before him, he naturally supposed that the lower lock level would have gradually fallen. When that lower lock level began to increase in the evening of the day before he was perfectly mystified to know why it was, and subsequently it turned out that the wind effect was the trouble.

I have not a great deal more to say, gentlemen, except to show you some of the details which our system operators have to follow in managing this water.

Mr. FREAR. What would be the effect if you allowed this water to flow over, at its natural stage, the top of the spillway, or whatever you call it, instead of regulating it with all these gates?

Mr. KELLOGG. The effect would be this: Below the dam we would have no way of controlling the variation in water due to the difference in our loads. Of course, you understand, gentlemen, that if we tried to run a lot of water through our turbines when there was not load without gates to open, the result would be to shut up the vanes of the turbines. So the effect below the dam, if we had no gates, would be that it would be a physical impossibility to prevent wide fluctuations all the time, on account of the difference from time to time of the requirements of the power load.

Mr. FREAR. This water flows through your turbines, as you call them. That would reduce the amount of flow through the spillway, would it not, proportionately?

Mr. KELLOGG. Yes; but if you had not gates with which to control that you could not have any control over it.

Mr. FREAR. You would have the dam proper?

Mr. KELLOGG. You would have the dam proper with such water as came along spilling over, but you would have that flow varying all the time, due to this change in the power-station load. You would have anything but a level river below. In other words, these gates, gentlemen, are absolutely essential for navigation. If they were not used for any other purpose, they are absolutely essential to satisfactory navigation on the Mississippi river.

Mr. FREAR. You say there are 119 spillway gates in your dam, each of them 30 feet wide; and with the present stage of water being about 10 feet flowing over them, what would be the effect when they are open?

Mr. KELLOGG. Above the dam the effect would be this, Mr. Frear: During times of extremely low water, say down to 20,000 second-feet, the level of the water would drop down to 514, and there would be great open swamps around the edge of the stream, which would endanger health.

Mr. FREAR. What is the reason for that?

Mr. KELLOGG. If you had no gates on the dam, the stream would drop down to the top of the crest.

Mr. FREAR. It would have to reach the top of the spillway, anyway?

Mr. KELLOGG. That low water is as high as it could get. This lake would go out of existence. You would have this great morass of swamps, unsightly lands above there, and steamboats could not reach their wharves. When the flood came along you would have just exactly what these gates provide.

Mr. FREAR. What do you call the top of the spillway?

Mr. KELLOGG. The top of the spillway is 514.

Mr. FREAR. This is 524.

Mr. KELLOGG. That is the level of the water.

Mr. FREAR. I am speaking of that, putting the spillway at a height that will be equivalent to where the water flows over, or at the height of 524 or 523, that you are authorized to carry.

Mr. KELLOGG. The authority was to build a dam with the top of the spillway between 515 and 520. We selected 514, because that is all we wanted to pay the damages for flooding above.

Mr. FREAR. You carry 523?

Mr. KELLOGG. The level of the crest of the dam stays fixed.

Mr. FREAR. That is 38 feet?

Mr. KELLOGG. Twenty-nine feet. The crest of the dam is fixed in space, a solid concrete dam.

Mr. FREAR. Thirty-eight feet above low water?

Mr. KELLOGG. Water level or crest?

Mr. FREAR. What is the crest?

Mr. KELLOGG. The water level or pond level is at the present time about 38 feet, which is about 524 Memphis datum.

Mr. FREAR. Coming down to a specific instance, here is the case of the Army engineers who ask that that water be let out, and you let out $2\frac{1}{2}$ feet of water on one occasion to help their boat to get down the stream. Here is a navigation company existing constantly, which has use of the water. Have you let the water out in any way for them?

Mr. KELLOGG. We would, if we were ordered to do so.

Mr. FREAR. It rests with the War Department?

Mr. KELLOGG. We are entirely under their orders.

Mr. FREAR. Why do they ask it for their particular boat that is making an inspection trip, or whatever it may be, and not provide it can be done for the benefit of navigation at other times?

Mr. KELLOGG. I do not see how I could answer that question.

Mr. FREAR. In other words, you are storing this water up there, and one of the conditions I assume when you asked for this water was that with this body of water there that you could regulate the flow of water below, was it not? One of the expectations was that you could improve navigation. Navigation, in other words, is more important than the power, as you stated, in the first place.

Mr. KELLOGG. Yes, sir; there is no doubt about that.

Mr. FREAR. Was it not the understanding that that vast body of water, 60 miles back would be used in the aid of navigation, assuming the fact to be, as in your judgment, that navigation is the important question?

Mr. KELLOGG. It is a fact, Congressman Frear, under this arrangement that the Army engineers made, that when the flow of the Mississippi River during navigation season reaches 20,000 second-feet or below, they have a right to demand withdrawal from our pond in the aid of navigation as low as 519.

Mr. FREAR. Supposing the demand for navigation does not exist, and there is a sufficient amount of water impounding?

Mr. KELLOGG. That question has not come up, because all of the experience of the Army engineers is that they have nothing to gain by drawing the water below 20,000 second-feet.

Mr. FREAR. Then why did they ask for $2\frac{1}{2}$ feet of water to navigate their boats?

Mr. KELLOGG. They asked that because they did not think their boat could get over a sand bar.

Mr. FREAR. The Chief of Engineers said in this room that the conditions below Rock Island were better than they ever had been, and we assume that it was on that trip when the water was let out.

Mr. KELLOGG. That was the inspection trip of the Mississippi River Commission.

Mr. FREAR. They had $2\frac{1}{2}$ feet extra water through the dam at that time.

Mr. SWITZER. I do not see any advantage of helping people to get down there in October.

Mr. FREAR. I want to see how the water affects navigation. I was going to ask this about the power. There was a point I did not quite understand. [To Mr. Kellogg:] You have a great load, as you say, during certain portions of the day and that requires increased power?

Mr. KELLOGG. Yes, sir.

Mr. FREAR. At that time does the water go through at the same rate it does when there is very little load on, taking line "A," which you spoke, at the second and third hour, when the load is very low?

Mr. KELLOGG. Yes, sir.

Mr. FREAR. Coming up to 8 o'clock, it is very high?

Mr. KELLOGG. Yes, sir.

Mr. FREAR. Is the same rate of flow going through these gates during all this time?

Mr. KELLOGG. I will answer your question. Take that whole period. At that time there were five turbines running and eight and one-half spillways open.

Mr. FREAR. What would that amount to—what percentage of the regular flow would that be?

Mr. KELLOGG. It is supposed to be the absolutely natural flow, and the sum of those two is always supposed to be the constant natural flow.

I have this here, just as further evidence of the care we use on our daily records, for figuring out the flow of the stream. Near my right hand here are the original records from the gauges which record to 0.01 foot during that day. Over here [indicating] in the column is a place for marking the discharge through each turbine. That discharge through the turbine varies, of course, with every load, and also with the head on them, which also varies with the flow of the river, and over at the side for each hour of the day is figured out the exact flow of the river at that time. This is an original record, which I can not leave here.

Mr. FREAR. This fluctuation in this large diagram, of which you speak, then, has no connection with the water as it passes through your gates?

Mr. KELLOGG. What, sir?

Mr. FREAR. That has no connection—this fluctuation—you say, with the water as it passes through the gates of the dam?

Mr. KELLOGG. You will find that the major portion of that curve is very slightly serrated—that is, under normal conditions with the sun shining and everything lovely and bright. These certain variations in time of storm, when there are unusual conditions, mask the records of the instruments on which we have to depend for what we do.

Mr. FREAR. For instance, here where it varies a foot or more, or 2 feet, as it is stated—I do not know just exactly the amount—that has no relation to the water as it passes through the gates?

Mr. KELLOGG. That is caused by the fact that there is more coming down than should—than the natural flow.

Mr. FREAR. Going out through the gates?

Mr. KELLOGG. Through the gates and the turbines, the two together.

Mr. FREAR. If there is more coming at times than should come, does it not necessarily follow that at other times there is less comes down?

Mr. KELLOGG. That is true; yes, sir.

I just wanted to make this point, that all of those variations such as that are the best possible approximations we can make to keep the natural flow running. We are perfectly frank in showing these records exactly as they are. We have not tried to iron out any of these little variations. They are just exactly as they were made, and on the average the flow of the river is absolutely maintained. As you say, we are sometimes above and other times below, and some of these difficulties came when water was above natural stage.

Mr. GALLAGHER. May I ask one question? It may not be just in line of Mr. Kellogg's present testimony, but this same thing bothered me yesterday and perhaps he can throw some light on it. Does not the original law permitting construction of the dam provide how high the dam shall be?

Mr. KELLOGG. I think I have the act here. I know it by heart, practically. It provides for a dam as follows:

And to erect, construct, operate, and maintain a dam with its crest at an elevation of thirty to thirty-five feet above standard low water across the Mississippi River at or near the foot of the Des Moines Rapids.

Mr. GALLAGHER. With its crest 30 to 35 feet?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. This schedule here shows that a half mile below on Memphis datum is 480 feet above sea level?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. And the height of the dam is 514 feet?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. Making 26 feet as the height of the dam?

Mr. KELLOGG. Standard low water—that 490 feet you have reference to was just the gauge reading that day—standard low water 484.65.

Mr. SMALL. At which point?

Mr. KELLOGG. At the point of this gauge reading a half mile below the dam.

Mr. GALLAGHER. And is it on the basis of standard low water that the elevation of the dam height is based?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. The crest is 514?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. Then that would make the dam just 30 feet, would it not?

Mr. KELLOGG. Twenty-nine feet, sir—514 less 485.

Mr. SMALL. Standard low water at Keokuk is how much above sea level?

Mr. KELLOGG. At the lower lock it is 484.65 feet; at the dam, half a mile farther north, it is 485.

Mr. SMALL. And at the dam it is what?

Mr. KELLOGG. That is at the dam, 485; half a mile above the lower lock. I have here one of the 12 original drawings.

Mr. GALLAGHER. Before you go on with that, might I finish up one or two questions, and then I should personally like to have time to get that explanation. In other words, your dam was actually constructed 29 feet?

Mr. KELLOGG. Yes, sir.

Mr. GALLAGHER. Then, how about the crest?

Mr. KELLOGG. That is the crest. The crest is 29 feet above standard low water.

Mr. GALLAGHER. I am getting at that 10 feet, which I could not comprehend yesterday.

Mr. KELLOGG. Let me explain how that comes about.

Mr. GALLAGHER. In other words, are the 10 feet on top of the 29 feet?

Mr. KELLOGG. Yes, sir; 10 feet of water, but no more dam.

Mr. GALLAGHER. How can you impound the water? If the dam was not there, you would not be able to put 10 feet more on top of it, and if the dam was not there you could not keep half the height of this water.

Mr. HUMPHREY. There is that much water flows down the river.

Mr. GALLAGHER. That 10 feet bothers me.

Mr. KELLOGG. I will try to explain it. This drawing here is one of the eleven original drawings, signed by A. MacKenzie, Chief of Engineers, and Robert Shaw Oliver, Acting Secretary of War. It shows this dam in plan and elevation. This elevation shows this bridge across the stream, with 119 arches, and between these arches are these solid spillways, which are shown in cross section right there [indicating]. Here is the pond. The water flows down over that spillway when it discharges. You will notice from this plan, looking down on top of the job, that in each of the piers there is a slot cut, and a gate fits down into those slots. There are 119 gates, each 32 feet high and 11 feet wide, each weighing 11 tons. They are raised up and down by what we call the "dam traveler"—a large, traveling crane over the top of the dam, which reaches down and picks up the gates and raises or lowers them as required.

Mr. SWITZER. Right there, about how many of these are closed and opened during the day?

Mr. KELLOGG. There is no rule. It depends on the flow of the river. I have seen as many as eighty open, and I have seen none open.

Mr. HUMPHREY. It all depends upon the amount of water through the turbines.

Mr. KELLOGG. You have to make the sum total of the water that flows through the turbines and over the spillways equal the flow of the river.

The reason these gates are of the dimensions I have already stated is simply this: It is the desire of the power company to maintain a level water in the pool above the dam which will always be the same, for the benefit of navigation, so that these cities which are bordering along the pool can build wharves and docks and have substantially a fixed range they know they can work in. The height of water which is shown at the top of these gates is 525. By the way, the water never goes over the gates; they are simply used to regulate the height of the water. With the highest known flood in the Mississippi River of 362,000 second-feet, the height of water over

those spillways, if there were no gates, with a 29-foot dam, would be 525 feet. That is, 525 feet Memphis datum or 11 feet above the top of the spillways.

Mr. FREAR. That would be what depth of water?

Mr. KELLOGG. That would be the depth with the highest recorded flow of the Mississippi River. That is how that 525 or 11 feet are arrived at, simply the level of the water.

Mr. FREAR. Water, or crest of the dam?

Mr. KELLOGG. The crest of the dam remains fixed.

Mr. FREAR. The crest of the water?

Mr. KELLOGG. You mean the water level in the pond?

Mr. FREAR. Yes.

Mr. KELLOGG. The water level in the pond going over that 514-foot crest, with the highest known flood, is 525 feet above sea level, or 11 feet above the crest of the dam.

Mr. HUMPHREY. In other words, that figure was selected so as to take care of the highest known water?

Mr. KELLOGG. Yes.

Mr. FREAR. The act provides—this may be very simple, but I do not quite understand—30 or 35 feet, does it not?

Mr. KELLOGG. Thirty or thirty-five feet.

Mr. FREAR. You say the Army engineers have authorized 38 feet, and that is practically the stage it is kept. What is the reason for that?

Mr. KELLOGG. They have not authorized the 35-foot dam.

Mr. FREAR. They have authorized 38-foot level?

Mr. KELLOGG. Yes; they have.

Mr. FREAR. What is the reason for that?

Mr. KELLOGG. The reason for that is in order to maintain a constant level of water above the dam.

Mr. FREAR. Why should the water be more than 35 feet, or more than in the act?

Mr. KELLOGG. Because at times it will get above that automatically, and we have to pay damages for the flooded land we cover. With that 514 feet, the highest known flood, the water will go through, with all the gates open.

Mr. FREAR. But you would not pay as much for 35 as you would for 38, in case of sudden flooding. I am asking why that extra feet is permitted by the engineers, in addition to the amount fixed by the act. You understand what I mean? The act provides 30 to 35 feet, and 35 is the maximum, as I understand it. That level of water is maintained, as you say, at 38 feet.

Mr. KELLOGG. If you will pardon me, Mr. Congressman Frear, there is nothing in the act about the level of the water. The only thing the act says is about the crest of the dam.

Mr. FREAR. What is the object of that fixing the crest of the dam if it is permitted to impound the water and raise it above that height to 38 feet or 45 feet? Why not raise it to 45 feet? The only question would be the question of damages for flooding, and the Army engineers have given them authority to fix that in addition to the act. They have fixed 3 feet over the maximum amount given for the crest of the dam?

Mr. KELLOGG. No; they have not, Congressman Frear.

Mr. SWITZER. I would like to ask a question. As I understand, the act gives you a right to erect a dam anywhere from 30 to 35 feet?

Mr. KELLOGG. Yes, sir.

Mr. SWITZER. But you selected 29 feet?

Mr. KELLOGG. Twenty-nine feet is the height we selected.

Mr. SWITZER. That 30 to 35 feet has nothing to do with anything except the height of the dam?

Mr. KELLOGG. Yes, sir.

Mr. SWITZER. A 29-foot dam, and that remains that way?

Mr. KELLOGG. Yes, sir.

Mr. SWITZER. This 11-foot superstructure over there has nothing to do, so far as the impounding the water goes, as I understand it; that is, it only lets water through when there is water running through the turbines; that is, the sum of the water running through the turbines and the sum of the water running through the spillways is the normal flow of the river?

Mr. KELLOGG. Yes, sir.

Mr. SWITZER. But, as I understand it, so far as the act is concerned, it gives the right to erect a dam 30 to 35 feet, and you have made your selection at 29 feet. You have not made the dam any higher?

Mr. KELLOGG. It is lower than the act provided.

Mr. FREAR. I am trying to find out what is the relation of the act to the authorization of the engineers to fix this at 38 feet.

Mr. KELLOGG. That is what I tried to explain a while ago. If there were no gates, no superstructure, but just a plain masonry dam 514 feet high, then when the maximum known flood came along it would, in order to get over that dam, stand at a level of 525 feet—11 feet above the crest of the dam—and that is how that level was determined by the Army engineers.

Mr. HUMPHREY. In other words, that superstructure is not for the purpose of holding the water but for purpose of regulating the flow.

Mr. KELLOGG. Absolutely.

Mr. FREAR. But you do hold it 3 feet higher than the maximum amount that is given in the act for the dam—holding 38 feet?

Mr. KELLOGG. We do not. There is not one word in the act to that effect.

Mr. FREAR. I mean the measurements here are 523, the level of the water that is above low water.

Mr. SMALL. I do not know that you and I disagree about the law, but leaving out what the law means, Mr. Kellogg's contention is that the dam is a solid structure, and he contends that this superstructure above is simply a part of the spillway and not the dam proper.

Mr. FREAR. But we know that many of the actions in court are just to find out what authority there is for placing the superstructure upon the dam. I knew nothing about any litigation before you spoke.

Mr. KELLOGG. There has been litigation; I think we might as well state that frankly right here. In 1913 the United States Government filed a condemnation suit against Mr. H. D. Everingham, who is here present, in which the question of our dam being of an illegal height was raised, and the Federal court ruled that this dam was legal; that the crest of the dam was the top of the solid concrete

structure; and that decision has never been changed by a higher court to this day.

Mr. SMALL. Was that a district court?

Mr. KELLOGG. The United States District Court for Illinois.

Mr. SMALL. Could the merits have been passed upon if the court had jurisdiction? I understand this was a damage suit. I do not know anything about it. I am asking you if the court could have passed upon that question.

Mr. O'HARA. I think I can answer your question. This was a condemnation suit brought by the United States Government under the authority of the Attorney General of the United States in the Federal court before Judge Humphrey at Springfield, Ill., and this question was raised at that time as properly an issue in the case, because if the dam was at an illegal height it would back the water up the river farther and submerge this particular property, and hence this question was a material and pertinent question in that case and was passed upon by the district court.

Mr. SMALL. Did the court make findings?

Mr. KELLOGG. Yes, sir.

Mr. SMALL. As to the height of the dam?

Mr. KELLOGG. I am not prepared to say that the court made any written findings or order, but he decided that question in the determination of the case. After the court sustained the legality of the damage, then the question of the damages to the property was submitted to a jury to pass upon. The Mississippi River Power Co., as required by the act, is compelled to pay all damages for submerged property, and all that sort of thing; and they have settled without suit or trouble with something over 1,500 people. But there were two or three suits, and this was one; and in this case, as I recollect it, something like \$35,000 was claimed, and we could not agree, and hence this condemnation suit, and the jury returned a verdict of \$7,500.

Mr. FREAR. I know nothing about the litigation. I have not talked to Judge Rainey. I was going to suggest this: I was wondering if he had any question to ask. He knows about this matter, and he would be only interested in bringing out what was desired by the committee.

Mr. HUMPHREY. I want to ask one question. Is there a lawsuit pending between the power company and this steamboat company?

Mr. KELLOGG. Yes, sir; they have sued us for \$50,000.

Mr. HUMPHREY. Is that suit pending now?

Mr. KELLOGG. It comes up March 12, in Quincy.

Mr. RAINEY. How much power can you generate there at low water, without impounding the water?

Mr. KELLOGG. By "low water" just what flow do you mean?

Mr. RAINEY. I mean the ordinary low water of the river, which I presume is about 21,000 second-feet.

Mr. KELLOGG. The lowest known flow of the Mississippi River at Keokuk is 10,700 second-feet, and, of course, that is our limiting feature as a power manufacturer. In order to get it in horsepower, as people are more familiar with that, we can make about 85,000 horsepower, I think it is—I am not sure it is quite as large as that.

Mr. RAINEY. You stated a while ago and I have forgotten.

Mr. KELLOGG. About 80,000 horsepower. That is all the power we can make at the lowest known flow occurring during 40 years.

Mr. RAINEY. At the standard low water that an engineer would mention in describing how much power you could develop there at low water.

Mr. KELLOGG. With 20,000 second-feet we could make twice that, I should think, about 150,000 horsepower.

Mr. RAINEY. I read a letter in the record yesterday from the chief of engineers, of recent date, in which he stated that without impounding the water there, at low water, you could only develop 77,000 horsepower.

Mr. KELLOGG. That is the lowest known day; that is what he evidently had reference to. I guess 77,000 is more nearly correct.

Mr. RAINEY. In impounding as much water as you are permitted to do under the permit issued by the engineers, how much can you develop there?

Mr. KELLOGG. Well, that would not affect the amount being developed at all, Mr. Rainey, in horsepower. The only value storage would have is that it would tend to increase the maximum amount of power which could be delivered and would also slightly increase the amount of power in total, that is, the amount of energy which could be obtained out of the stream. So far, we have never had occasion to use it.

Mr. RAINEY. The chief of engineers stated in the letter I read into the record that by impounding as much as you are permitted to impound you could develop but 104,000 horsepower. Do you know what he meant by that?

Mr. KELLOGG. I understand what he meant by the amount of power we could get from the stream at its lowest flow, but the amount you could get from impounding would depend entirely upon the flow of the river. If the river was flowing a little bit more than at another time you could get a little more than if it were not flowing so much.

Mr. SMALL. This hearing was promised by the chairman of the committee, Mr. Sparkman, at the request of Mr. Rainey, when the river and harbor bill was under consideration, and in pursuance of that these gentlemen have come to make a bona fide complaint and, of course, at the same time the representatives of the power company were given an opportunity also, and while it is a very busy season in Congress, yet we should give all a full hearing.

Mr. HUMPHREY. I have no objection, but I want to get on the floor of the House; and if they have any further witnesses I would like to have them make their statement, and then I have no objection how much time Mr. Rainey takes to go into the question.

Mr. RAINEY. I shall not take any more time, Mr. Chairman.

Mr. SWITZER. Do you have any objection to stating how much power is actually being furnished at this time?

Mr. KELLOGG. Not the slightest objection.

Mr. SWITZER. How much are you actually furnishing in horsepower?

Mr. KELLOGG. You mean in total?

Mr. SWITZER. The total.

Mr. KELLOGG. During the year 1916 the total number of kilowatt-hours manufactured—

Mr. SWITZER. You mean for the whole year. What I mean is as to the customers.

Mr. KELLOGG. I stated some time ago that our largest customer is the public service companies in St. Louis—the Union Electric & Power Co.—to whom we sell 60,000 horsepower. The next largest power consumer we have is the Atlas Portland Cement Co., which is at Ilasco, 2 miles south of Hannibal, which takes about 10,000 horsepower. The third largest customer is the East St. Louis Light & Power Co., at East St. Louis, Ill., which takes somewhat more power than the Atlas Co., but not at as high a load factor. Our fourth largest customer, I think, is one of the local industries in Keokuk, which has come there since the plant was established, and which came there on account of the existence of this large water-power plant there, and is a very substantial industry. They take, with what they are adding this summer, about 8,000 horsepower. The next largest is the Central Illinois Public Service Co., a large distributing company, not of very large size, but covering a large area in central Illinois, which takes from us about 3,000 horsepower. From that point down the customers are small utilities, from 1,500 horsepower in size down to 100 horsepower; and in addition to that we have also another local industry at Keokuk which at the present time is taking about 2,000 horsepower for the manufacture of electrolytic zinc. Does that answer your question?

Mr. SWITZER. How much is that altogether?

Mr. KELLOGG. One hundred and ten thousand horsepower.

I have nothing more to say, gentlemen. My province has been to try and indicate to you that we consider ourselves blameless in the difficulties which have occurred this year, but we do welcome the closest and fullest inquiry into our business. We are trying to do an honest business, in an honest way, out before the public, and as trustees for the Government, and if we are not doing it right we are very glad indeed to be shown. We think we have the best experts and the best instruments for handling the river. If we have not and a Government commission or a commission appointed by this committee can show us where we are wrong we shall be very glad indeed.

Thank you for your attention.

ADDITIONAL STATEMENT OF MR. RAINEY.

(By permission of the committee Mr. Rainey submitted the following additional statement for printing in the hearings:)

HOW MUCH POWER CAN BE DEVELOPED.

During the hearings the statement was made by a member of the committee with reference to this matter that he had called up the Chief of Engineers and he replied that the letter I read to the committee from the Chief of Engineers did not mean what I said it did. I immediately addressed to Gen. Black, at present the Chief of Engineers, the following letter:

FEBRUARY 16, 1917.

Gen. WILLIAM M. BLACK,
Chief of Engineers, War Department,
Washington, D. C.

DEAR SIR: In June, 1914, I addressed an inquiry to the Chief of Engineers requesting information as to the electrical energy that can be produced at the Keokuk Dam on the Illinois River without impounding water and as to the

amount of electrical energy that can be produced there if the water is impounded in the nighttime under the regulations at present prescribed by the War Department. On June 13 you sent me the following reply:

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, June 13, 1914.

Hon. HENRY T. RAINEY,
United States House of Representatives.

SIR: In reply to your letter of the 2d instant, requesting information as to the electrical energy that may be developed on the Mississippi River at Keokuk, Iowa. I have the honor to quote for your information from a report on the subject by the district engineer officer at Rock Island, Ill.:

"The average power that can be generated at Keokuk at low water, without impounding the water, is 77,273 horsepower.

"If water is stored at night to the full extent authorized by the War Department the average low-water output during 10 hours of darkness will be 38,636 horsepower and the corresponding average output in the daytime will be 104,870 horsepower.

"The output of power is not affected by the river being frozen over."

Very respectfully,

DAN C. KINGMAN,
Chief of Engineers, United States Army.

At a hearing yesterday before the Rivers and Harbors Committee of the House I made the statement that at low water, without impounding the water, there could be generated at Keokuk 77,273 horsepower. I also made the statement that if water be stored at night under the regulations prescribed by the War Department, a development of 104,870 horsepower was possible in the daytime, with a development of 38,636 horsepower in the nighttime. This statement was most violently combatted by representatives of the Keokuk Dam, who insisted that they were producing now 110,000 horsepower and could produce nearly 200,000 horsepower. A member of the committee at once called up your office, and afterwards told the committee he was advised by your office that the letter you wrote me did not mean what I said it did. I therefore wish you would advise me what the above letter means, so that I can understand it.

Very truly, yours,

HENRY T. RAINEY.

In reply to my letter I received from Gen. Black the following letter:

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, February 19, 1917.

Hon. HENRY T. RAINEY,
House of Representatives.

MY DEAR SIR: In reply to your letter of February 16, I would say that the information furnished you on June 13, 1914, was correct. The amount of power which can, theoretically, be generated from the low-water flow of the Mississippi River at Keokuk and from the discharge of the river, if storage is permitted under the regulations hitherto prescribed by the department, while correctly stated is not altogether inconsistent with the quantities stated by representatives of the Mississippi River Power Co., since the actual amount of power which may be marketed as the result of a given output depends upon the nature and incidence of the demand. With a load factor of 50 per cent, it might be possible by a suitable adjustment of the load to sell twice as much power as that theoretically available. At present there is no information available in this office concerning the manner in which the load of the Mississippi River Power Co. is distributed, and I can, therefore, go no further than to say that the variance between the figures hitherto furnished you and those recently given by the representatives of the power company is probably due to the cause that I have outlined above.

So far as concerns the statement in your letter that this office was called up by a member of the Rivers and Harbors Committee, who afterwards told the committee that he had been advised that the letter of June 13, 1914, did not mean what it said, I wish to say that an investigation has been made in

this office and that I am unable to learn that any such telephone inquiry was received, and I can not place upon anyone the responsibility for the statement which has been ascribed to this office.

Very respectfully,

W. M. BLACK,
Brigadier General, Chief of Engineers.

The above communications, it seems to me, completely establish my contention.

Without impounding this water the company would suffer considerable loss. Navigation of the Mississippi River, however, is undoubtedly the paramount issue before this committee, and this committee is not concerned with the amount of money this power company may be able to make out of the concession generously given them by Congress.

THE EFFECT THE IMPOUNDING OF WATER HAS ON THE NAVIGATION OF THE RIVER.

I have in my possession a very large number of letters and much other data on this subject. I quote from a speech made before the Upper Mississippi River Commission of October 15, 1913, by Maj. M. Meigs, United States engineer in charge of the upper Mississippi River improvement, with headquarters at Keokuk. Regarding the power plant, he says:

They certainly have produced oscillations in the water level below the dam that we never experienced before.

In my opinion they can not operate that plant successfully without some disturbance of the water levels.

* * * * *

The ideal thing would be to have the level of the pool always fixed, and the same amount of water passed on as passing into it.

The law requires the power company to pass each day all the water that comes into the pool that day, but it does give them the right to vary the flood from hour to hour.

If they produce a tide (as we have seen that they do), it must be remembered that this tide goes as much above the normal stage as it goes below, and the disturbance of the natural flow is one-half the tidal fluctuation.

* * * * *

Now, gentlemen, there is no rose without some thorns. Roses differ, and some have colorless flowers and big sharp thorns. Others have brilliant flowers and thorns that are reduced to the least proportions consistent with the rose.

I quote from a letter written me on October 10, 1913, by Harry E. Lancaster, pilot of the steamer *Dubuque*:

I can say that the water at Keokuk, Iowa, has a fall of 18 or 20 inches during the time the power company holds the water back at night. I know this to be a fact, as I have seen it; and was pilot on the steamer *Dubuque* this season for five months; and this steamer made three landings a week at Keokuk; and in the morning the steamer *Dubuque* had to back for some time to free herself from being aground at that landing. This has delayed steamer each time.

At times we have landed or tried to land so that we could place the steamer gangplank on the runway; but this was impossible to do, because of the water having lowered so as to cause the gangplank to come 5 or 6 feet short of reaching the water's edge.

I quote from a letter of W. A. Blair, of the White Collar Line, dated December 17, 1913:

DEAR SIR: Replying to your kind favor of yesterday, will state that our boats had no trouble at all during seasons of 1910, 1911, and 1912 in navigating between Burlington and Keokuk, except in one instance.

I quote from a letter of Joseph Buisson, pilot of the steamer *Quincy*:

Lastly, I can say that the Keokuk Dam has injured navigation below Keokuk, by withholding the water that ought to have spilled over the dam to keep up its even flow, and it will, for next season and forever hereafter, if the power company is permitted to hold back the water after night, or any time, that prevents the river's natural flow. The fact of this was thoroughly amplified with us last season in the trip mentioned above.

In a letter dated October 10, 1913, Bert Edwards, pilot of the steamer *St. Paul*, says:

Always before in low water the channel was very close, but good except in a few wide places. This summer there was no good channel below Keokuk except in a few places where the water has always been deep.

There is no question in my mind but what the addition of more turbines and the holding back of more water will not only interfere with but stop all navigation of boats of any size between Keokuk and St. Louis when there is less than 2 feet on the gauges.

WHAT EFFECT THE BUILDING OF THIS DAM HAS HAD IN THE MATTER OF
CHEAPER LIGHTS AND CHEAPER POWER.

Bearing in mind the statement made by Col. Cooper that "in Keokuk power has fallen from 15 cents per kilowatt-hour to 8 cents per kilowatt-hour, and other cities have been benefited in the same proportion," and also bearing in mind the fact that the Central Illinois Public Service Co., a Samuel Insul corporation, distributes power in Illinois generated at the dam, and that Stone & Webster distribute power in Iowa generated at the dam, and that the North American Co. and its subsidiary companies control the distribution of power from the dam in St. Louis, I desire to print some data in my possession.

Stone & Webster now control the Keokuk Dam. They also control the utilities in the city of Keokuk. They own the electric light company. Therefore, Stone & Webster, controlling the Keokuk Dam, sell hydroelectric power to themselves at one-half of 1 cent per kilowatt-hour, which they in turn sell to consumers a short distance away from the dam in Keokuk at 8 cents per kilowatt-hour.

Stone & Webster control now the street-car lines in Keokuk. As managers of the Keokuk Dam properties they sell to themselves as managers of the street car lines power at one-half of 1 cent per kilowatt-hour, the cheapest power the street-car companies have ever had. However, controlling the street-car lines, they sell five tickets for 25 cents, and the rumor is that they now propose to raise the price to 6 cents per ticket. Prior to the building of the dam the local company, with much more expensive power, sold six street-car tickets for 25 cents. The interesting question is how much, under these circumstances, are the people of Keokuk benefited by the building of this dam. In this connection I print a letter just received from G. W. Fanning, dated February 19, 1917. Mr. Fanning is a merchant in Keokuk, Iowa.

KEOKUK, IOWA, *February 19, 1917.*

HON. HENRY T. RAINEY, M. C.,
Washington, D. C.

DEAR SIR: Previous to Stone & Webster taking over the street-car system of this city we, the citizens of this city, would get six street-car tickets for 25 cents.

This went on for years. Since they took charge they have raised said street-car fare to 5 cents straight. It is the common talk here upon the streets in past few weeks that they wish to raise same to 6 cents each fare.

These are facts and can be established.

Yours, truly,

G. W. FANNING.

With reference to the amount charged for light and power in Keokuk and other near-by cities, I have received numerous communications. I print herewith, however, another letter just received from Mr. Fanning, dated February 19, 1917, on this subject:

KEOKUK, IOWA, *February 19, 1917.*

HON. HENRY T. RAINEY, M. C.,

Washington, D. C.

DEAR SIR: I hand you some of my electric light bills, receipted, for my electric lights, both before and after the Keokuk Dam people took and lit city from dam direct. The Mississippi River Power Co. and the Keokuk Electric Co. are both Stone & Webster's holdings.

My light (electric) bill to light my store costs me more since the power from dam has been furnished than before they furnished the city with electricity. My store has not been enlarged.

Further, the city of Keokuk, Ia., is paying just the same for its street lights as it did five years ago, viz, we are paying \$60 per light year; not a cent less; and we have lots more lights in service.

These are facts and can be established.

Yours, truly,

G. W. FANNING.

With reference to the service at Fort Madison, Ia., not far from the dam where Stone & Webster have secured the franchise, I print a letter received recently from B. C. Davis, a citizen at Fort Madison, Ia., addressed to me.

FORT MADISON, IOWA, *February 2, 1914.*

MR. RAINEY, M. C.

DEAR SIR: I am sending you two of my electric-light bills, which will explain themselves. The dam company, through their agents, Stone & Webster, who constitute the Ft. M. E. Co., promised us cheaper rates if we would vote them a new franchise. We voted them the franchise, and they have raised our rate 50 per cent, 15 cents for 1,000 meters and the old rate was only 10, and they charge us \$1 for meter whether we use it or not. The old rate under the Atlee plant was 50 cents. You can readily see we are getting it in the neck. I think this is one of the biggest outrages ever committed on a people. I am glad you are going after them, and I am sure that is the sentiment of nine-tenths of our people. The papers are bought up and a few citizens are on the "inside."

Yours, very respectfully,

B. C. DAVIS.

With reference to the methods of companies which distribute light and power in Illinois generated at the dam, I quote from a recent communication written to me by C. E. Beavers, mayor of the city of Barry, Ill., in my congressional district:

The Central Illinois Public Service Co. some time last year acquired the plant at this place, paying, according to their statement, \$20,000 for the same. The actual value of the plant does not exceed \$5,000, and a very few years ago could have been purchased by local people for \$3,500.

I quote the following from a recent issue of the Quincy Journal. Quincy, Ill. Quincy is within the power zone a few miles from the dam:

One of Quincy's bright traveling men says that Keokuk has always been a dull town, but that it has never been any duller than it is now. That is what the Mississippi Power Co. is doing for Keokuk. This traveling man has made Keokuk for 16 years, and he knows the conditions. You don't see any factories tumbling into Keokuk, do you, or Hamilton, or Burlington, or Quincy, or Hannibal? If the cheap-power talk of the Mississippi Power Co. amounted to any-

thing, factories would be rolling into these towns now. The fact is that in giving the Mississippi River away to the Mississippi Power Co. we have created a Frankenstein that is going to try to eat us up. And the only thing that will thwart its purpose is the strong arm of the law.

I quote from a letter by C. A. Johnston, whose address is 1232 Third Street, Fort Madison, Iowa:

I have my light bills to show that we are being charged more under the present management than we were charged at the time it was in private ownership, and there is no cheap rate for power that all were led to believe.

I am in receipt of the following letter from F. L. Thompson, mayor of the city of Roodhouse, Ill., in my congressional district, in the power zone:

There is considerable complaint in this city about the high prices we pay for electric current and the quality of the lights. The Central Illinois Public Service Co. has many different prices in the various cities in which they operate.

I quote from a letter received from O. A. Rothenbulcher, mayor of the city of Virden, which shows how the lines of the Central Illinois Public Service Co. connect up with the dam at Keokuk and with the coal fields of Illinois, showing that there is no competition at all in Illinois between power generated from coal and power generated at the dam:

Our electric-light plant was controlled by local capital until recently, when it was purchased by the Central Illinois Public Service Co., and we now receive our light from that company's power houses at Kincaid, Ill. We are paying the same rates that we have paid in the past.

I have a letter dated January 2, 1914, from Louis Lamet, mayor of the city of Warsaw, Ill., located a few miles from the dam:

Taking into consideration the grade of light furnished, it seems that we are paying more for the lights now than we did before we got our current from the dam.

I quote from a letter written by H. W. Smith, merchant of Roodhouse, Ill., to me, dated December 27, 1913:

To consumers here they are charging 15 cents per kilowatt-hour. To the Chicago & Alton Railroad, 3 cents a kilowatt-hour. The service is very poor at that. They do business here under the name of the Central Illinois Public Utilities Co., or something similar.

I quote from the White Hall Register, of White Hall, Ill., in the power zone:

ANOTHER ELECTRIC COMPANY.

The local light and power service has been so poor and unreliable for the past two or three months, and especially so since the Central Illinois Public Service Co. took charge, there is considerable agitation for the organization of a local company to engage in the business, and it is quite probable a franchise will be applied for from the city council at the next regular or special meeting.

In order to show the methods by which the distributing companies obtain control of cities in the power zone, I quote from the Barry Adage, of Barry, Ill., as of date of January 21, 1914:

On Friday evening the gang of men who are placing the wires on the poles of the Central Illinois Public Service Co. reached the eastern line of the city limits. The State foreman of the company, G. W. Cook, was here, and he was notified by the city authorities that he would not be allowed to violate the city ordinance (sec. 1 of art. 20), which reads as follows:

* * * * *

When notified to stop work until a special ordinance, as provided for in the above section of the city laws, could be prepared and adopted, G. W. Cook, the

representative of the company, seemed willing to obey the order. City Attorney Six had prepared the special ordinance, but as Mr. Cook took exception to a clause in the ordinance it was agreed that the city council should hold a meeting in the evening at which the ordinance could be amended if the aldermen would agree to make any changes. It appears that while G. W. Cook, the Central Illinois Public Service Co.'s representative, was occupying the attention of the city officials the foreman and the gang of men went to work and stretched the wires on the poles from the east to the west end of the city limits. When this fact was learned there was something doing, and Alderman Forshey at once swore out warrants for the arrest of Cook and all the men who helped to string the company's wires through the city, and Marshal Nations placed 22 of them under arrest and took them to the city hall, where G. W. Cook gave a bond of \$200 for their appearance on Saturday afternoon, when the case was to come up for trial.

* * * * *

The action of the company shows that little faith can be placed in the promises of such a corporation.

The company also has trouble with farmers west of here.

With reference to the above occurrence, I quote from the Pike County Democrat, of Pittsfield, Ill., as of January 21, 1914:

OUTWITTED THEM.

On being set free the men simply stayed around town as usual, but kept their mouths closed, and at about 3 o'clock the next morning went to the depot and put the line through while the authorities slept, and the next morning when the said authorities woke up the men had completed the line clear out of town.

With reference to the character of service cities in the power zone get compared to what they got prior to the building of the dam, I quote from the Greenfield Argus, Greenfield, Ill., as of February 27, 1914:

PUBLIC SERVICE GO HANG.

We were forced to do without electric current again Monday and had to go back to the case and set type and treadle our job presses with foot power. These utility companies are great organizations. No one's interests are consulted except their own. They shut off the current when they please and those who are dependent upon same can go to thunder for all they care.

I quote from the Waterways Journal, of St. Louis, Mo., as of September 29, 1913:

A SILENCED PRESS.

Why is the press of the valley silent while the interests of the people are in jeopardy? Why do the daily newspapers so persistently ignore the Keokuk situation? Why is there no outcry from the press over the exorbitant rates being forced upon the people for electricity from the Keokuk Dam? What is the nature of the influence that is being exerted to keep them silent? Why has there been a concerted attack by the daily press upon the steamboats because the steamboat men have told the truth about the condition of the river below the dam? Do the people know that they are being betrayed by the daily press? Why are mere trivialities exalted into large importance by the daily press in the stilted effort to create public opinion against well-known and trustworthy rivermen who have rendered the public faithful and valuable service? Have the railroads conspired to destroy the usefulness of the river as a great freight carrier? Is there a cloven foot somewhere in this thing?

Burlington, Iowa, is only a short distance from the dam at Keokuk and in order to show the unpopularity of this proposition in the vicinity of the dam I quote from the Saturday Evening Post of February 10, 1917:

WHY THE DAM SHOULD BE REMOVED.

Strange things transpire in the economic and industrial history of empires. Before the great flood there were irrigation and power dams in the Euphrates and Tigris Rivers, and the simple people of those days assumed that the dams

would remain for all time. But the dams have been bred out of those rivers as the thumb has been bred off of the horse, leaving in each instance only the sign of forgotten occupancy. There is some talk down in Congress now about the Keokuk Dam and the disappointment that has been put upon the people near it and far away. The quantity of the power has been exaggerated, the sale of the power has been effected in such manner as to increase rather than decrease the current prices for power all over the upper valley, and the further and final great truth is slowly coming to general realization that the manipulation of the water as permitted and as necessary to develop even the minimum power, has vitally impaired the navigable quality of the river as a great freight carrier. From all of these convictions to a point where the people will be demanding the removal of the dam in the interest of commerce and navigation is but a step. The great Northwest wants a cheap and serviceable water route to the Pacific Basin by way of the Panama Canal. Before this can be the dam at Keokuk will have to come out.

POWER IN ST. LOUIS.

In order to show that power is not being delivered in St. Louis at the same price as power generated from coal is delivered there, I quote from the Stone & Webster statement in Moody's Analysis of Investments, Public Utilities, and Industrials for 1916. With reference to the contracts made by the Mississippi River Power Co. the statement furnished by Stone & Webster is as follows, viz:

Contracts.—The company has made a contract to supply 60,000 horsepower for the street railway and light companies of St. Louis, about 140 miles distant. This contract is for 99 years, subject to adjustment as to terms at 10-year intervals, based on the then price of coal.

I have before me a recent article from the St. Louis Star, appearing in that paper January 30, 1917, from which it appears that an examination recently made by the Missouri Public Service Commission reveals that—

The Electric Co. of Missouri, the middleman in the Keokuk Dam power contract, made a profit of 25 per cent in the year of 1915 on power it sold to the Union Electric Co. and the United Railways. These two companies and the Electric Co. of Missouri all are owned by the North American Co. The Union Electric Co. recently was granted permission by the Missouri Public Service Commission to absorb the Electric Co. of Missouri and thereby will become owner of the Keokuk Dam power contract.

The Electric Co. of Missouri, according to this paragraph, seems to have succeeded the Mississippi River Power Distributing Co. Of course it serves no useful purpose whatever except to buy from the Mississippi River Power Co. the current generated at Keokuk and turn it over at such enormous prices to the public utilities in St. Louis.

The situation therefore is as follows:

Stone & Webster, the Samuel Insul companies, and the North American Co., all closely associated, occupying different fields, not competing with each other in the least, have succeeded in obtaining absolute control of this valuable property, valuable only on account of the franchise granted by the Congress of the United States, without compensation. With the assistance of the Stone & Webster people the stockholders who put up the money originally are being strangled. They are receiving no dividends whatever while these enormous profits are being made by the public service corporations and this situation, of course, would not be possible without the co-operation of Hugh L. Cooper, who is the vice president of the Mississippi River Power Co. and who is the largest stockholder in that

company. The whole proposition has turned out to be "A Mississippi River bubble," such as no writer of fiction ever dreamed of. I have called attention to the above facts on account of the remarks of Mr. Cooper in this connection and for the purpose of showing that no individual has ever been benefited in the least by the building of this dam. There is absolutely no competition created by it between coal and water power. Public service corporations of St. Louis are burdened and will be for nearly a century unless some relief can be granted them with this "Old Man of the Sea." All through the power zone cities and villages are returning to the municipal plant system and in addition to all this, with the consent of the engineers, water is being impounded above the dam in the night time and navigation below the dam is being ruined. The millions expended on the Mississippi River are practically wasted as long as this impounding of water is permitted to continue. The engineers of this Government seem unwilling to furnish any relief. This committee has the authority to protect the navigation of the river and in order that the committee and the Congress and the country may be advised as to the facts I have presented this evidence.

ADDITIONAL STATEMENT OF MR. JOSEPH STRECKFUS.

Mr. STRECKFUS. There can not be a denial of daily material fluctuations below the dam of "high and low waves," as per all the statements from fishermen, at both Keokuk (right at dam) and those at Clarksville, Mo. (farthest point), and by the affidavits of the various captains, and also by their own blue-print map given to me and exhibited by me to this committee, showing the actual fluctuations as stated by me on respective dates given, in some cases as much as the fall of 1 foot 6 inches, and not 2 inches as Mr. Kellog states, and this during period that our steamers were being grounded.

The blue print I exhibited shows that on the falling river, as shown at Keithsburg, from July 30 to August 22, 1916, there was an additional impounding of water (above dam and in lake) of 10 inches.

Then, also, the additional daily material fluctuations below dam made the water so low at times as to prevent navigating. We were actually grounded and damaged and prevented from navigating said river by the following steamers and dates: Steamer *Quincy*, August 22, 24, 31, September 3 and 10; steamer *St. Paul*, July 20, August 9, 19, and 29; steamer *Dubuque*, August 24, September 4.

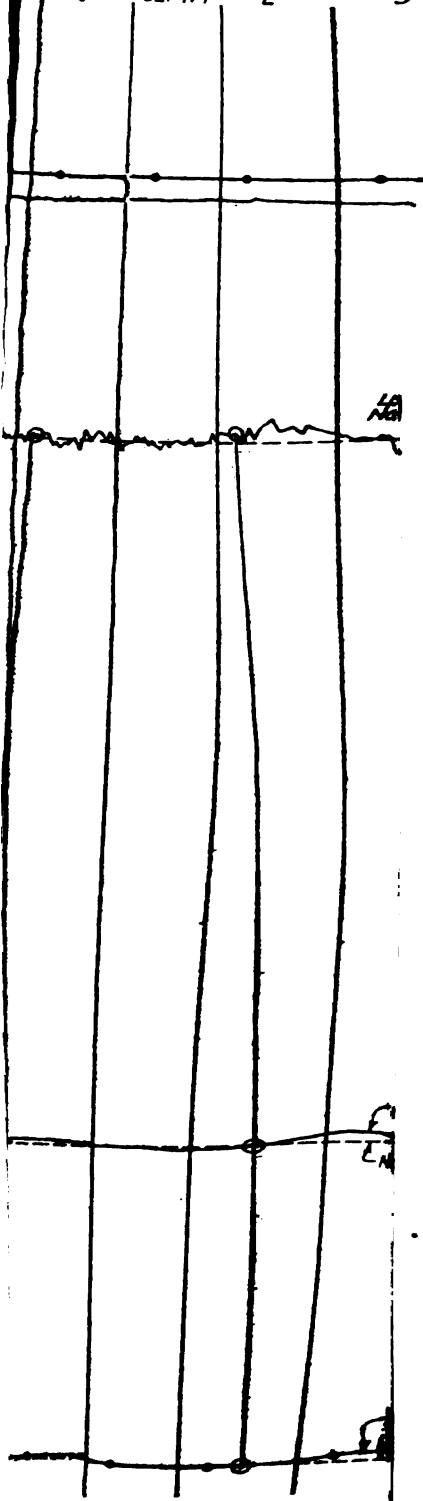
This blue print as shown to you verifies these statements and shows the falling water days previous as stated; that said blue print showed daily "high and low waves" and extended to Alton, and all our grounding and damage was caused by the above specific action or manipulation of said dam by power company, and not caused by the conditions resulting from a long-continued period of high water and rapid decline. If so, we would have had same trouble above the lake to St. Paul, a distance of about 460 miles, which we did not have. We were grounded only once, all during the year 1916 above lake, and ran 90 per cent under full speed. It has been shown that there is 38 feet of water in pool, held at low-water stage, as well as high, and this being 3 feet over the amount allowed by Congress, and that

31

SEPT. 1

2

3



100

5745

[illegible]

there has not been any public hearings by the United States Engineer Department or said power company, and the steamer men were in total ignorance of the same until this hearing. This head of water was retained even though we made complaint to both dam to river below, causing the lower stage of water from Keokuk to Alton during this above period and at same time.

We have given you actual dates, actual facts, and a blue print (no theoretically-made plans whatever); have been damaged and could not navigate; shown actual daily fluctuations, actual daily storage during falling-river period, and all. Ours are facts. We have been damaged much on account of the manipulation of the said dam.

STATEMENT OF MR. HUGH L. COOPER, VICE PRESIDENT, MISSISSIPPI RIVER POWER CO., STAMFORD, CONN.

Mr. SMALL. State your full name, residence, and position.

Mr. COOPER. My name, Mr. Chairman and gentlemen, is Hugh L. Cooper; residence, Stamford, Conn.; and I am vice president of the Mississippi River Power Co.

There are several points in the history of this Mississippi River Power Co. that have not been brought out correctly, and I think that if the question of the navigability of this Mississippi River is to be fairly investigated that we ought to get all of the facts into the record.

The first statement that has been made with reference to the Mississippi River Power Co. that was incorrect was made yesterday by Congressman Rainey, to the effect that the company was owned in England. That does not happen to be the fact.

The next statement that he made was that we made false representations as to the amount of power that we were going to create, in order to get the money, and I state to you, with some emphasis, that this is not so. Gentlemen who can raise \$26,000,000 do not deal in false pretenses. The statement he made with respect to the amount of power that we could create is likewise wrong by 150 per cent.

The statement as to the secrecy that obtained with respect to the impounding of the water is likewise not so. The facts of the matter are that when the question of impounding the water came up, I went in the front door of the War Department and proceeded to the sign on the door that said "Chief of Engineers," and was there referred to Col. Smith M. Leach, and we had this question of impounding up for about two months, during which time I frankly stated to the Government of the United States, in the offices which you have provided for that purpose, that unless the Mississippi River Power Co. could impound water in the manner set forth in this permit that we would never build the plant at all; and that is a matter of official record. After going over the entire situation and having explained to the Chief of Engineers and Col. Leach just why we had to have this permission, the Chief of Engineers wrote a letter to the Secretary of War recommending, because of the great advantages to navigation that were being created without cost to the Government, that we be given this permission, provided that we

would bind ourselves to pay to the United States Government \$50,000 to take care of any difficulties below the dam that the Government might find was necessary of correction.

Mr. SMALL. All of this you are referring to occurred before the passage of the act?

Mr. COOPER. No; it occurred after the passage of the act.

If the procedure in Government affairs I have just told you about is open to criticism and is a secret, then all of the business of this Government is a secret, because my discussion of this whole matter was entirely open and above board, as any one can easily find out who is seeking the truth. I realize I am speaking with some emphasis in this matter and this is because for four years I have been falsely accused with respect to the Mississippi River Power Co. and a lot of other things, and this is as close to Congress as I expect to get, and I welcome this opportunity, although I am not going to speak very long.

The question of the crest of the dam has been gone into, and I just want to say this one thing about the crest of the dam: If there is anyone here who has not got it thoroughly in their mind what the crest of the dam is and that we are below the requirements of the law, I would like to be questioned on that. Otherwise I would like to get on to some other points.

Mr. BOOHER. Why was it you only built the crest of that dam up 29 feet?

Mr. COOPER. Because we could not pay for the damages that would have been caused in flood-water time if we had built it any higher.

Mr. BOOHER. You put the superstructure on top of there, which does impound the water 10 feet higher?

Mr. COOPER. Yes; we did. But you are mistaken in concluding that the superstructure creates a new high-water level.

Mr. BOOHER. Does not that keep the water flowing over there except when you raise the gates?

Mr. COOPER. No.

Mr. BOOHER. Then I want that explained.

Mr. COOPER. All right, sir. We built the dam to an elevation of 514 feet.

Mr. BOOHER. That is equivalent to 30 feet?

Mr. COOPER. Well, practically 29 feet.

Mr. BOOHER. Supposing there was no superstructure and no gates on it at all and the maximum flood came along?

Mr. COOPER. The water would be 11 feet high at the crest of this dam in order to get by the dam.

Mr. BOOHER. Eleven feet high at the crest of the dam?

Mr. COOPER. Yes; that is what it would be, and that is why we stopped the dam at an elevation of 514 feet.

Mr. BOOHER. I do not understand that. Now, if the dam was only 29 feet, it would run over the dam?

Mr. COOPER. Yes; 11 feet deep.

Mr. TREADWAY. Not as an engineer, but just as a Yankee, please tell me is this the condition—you wear a pin indicating you stand high in the engineering society, and you come from New England, which is a good recommendation to start with. Let me see if I understand that point that Mr. Booher and I bothered about. If you had no

superstructure, here [illustrating] is the top of the dam. If the water from up here in Cooper Lake and all up the Mississippi River were at one time crowded right down into this mile stretch, where the dam goes across, it would come in such quantity that it would have to flow 11 feet higher than this [indicating] to get over; is that the plain English of it?

Mr. COOPER. That is the whole story; that is all there is to it.

I want to get at that, because this question has been in court and I appeared in court as a witness, and the court found we were a law-abiding corporation.

Mr. BOOHER. I am not saying that, Mr. Cooper. I can not understand why that 10 feet were put on top of that dam in the form of that superstructure if it was not put there to hold the water back.

Mr. COOPER. In low water.

Mr. BOOHER. Our trouble is the low-water proposition.

Mr. COOPER. Oh, yes, sir. I come now to another phase of the history of the Mississippi River Power Co. The statement has been made that nobody has received any benefits because of the building of this dam.

Mr. FREAR. I did not understand you to say that this is now 88 feet.

Mr. COOPER. It is not 38 feet.

Mr. FREAR. Thirty-eight feet on the level of the water?

Mr. COOPER. Oh, yes; that is right.

Mr. FREAR. If we have the floods, why will not the 11 feet additional depth come upon the top of the 38 feet?

Mr. COOPER. Because we have not built the structure so it can.

Mr. FREAR. The water has got to come down, has it not?

Mr. COOPER. The water is obstructed by a dam whose elevation is only 29 feet.

Mr. FREAR. But the superstructure?

Mr. COOPER. Oh, no; we pull the gates down and there is not any superstructure there then. When the floods come down we restore it to the condition of a dam 514 elevation.

Mr. FREAR. Then why could you not do that and hold the present stage 29 or 30 or 35 feet? What I am trying to ascertain is the purpose of holding it up to 38 feet.

Mr. COOPER. The first great purpose is to create navigation that the Government of the United States has placed at a very high value.

Mr. FREAR. In what respect?

Mr. COOPER. In the respect of having a perfectly level pool and a long pool, and a pool whose level practically never changes.

Mr. FREAR. Is it not a question of power?

Mr. COOPER. Oh, no; that has nothing to do with that, except in a secondary sense.

Mr. FREAR. Does not the additional head give power?

Mr. COOPER. Oh, yes, it does, but the whole consideration with the Government was that navigation interests should have first consideration.

Mr. TREADWAY. Let me follow out my own method of explanation just a word further. You say that you open the gates when there is a flood?

Mr. COOPER. Yes.

Mr. TREADWAY. Down to the level of the dam; in other words, this 11 feet of superstructure is practically open?

Mr. COOPER. Is removed.

Mr. TREADWAY. At time of flood?

Mr. COOPER. Yes, sir.

Mr. TREADWAY. It is not removed at time of low water?

Mr. COOPER. No, sir; but it is put back there to keep the pool level.

Mr. TREADWAY. In other words, at low water you have 29 feet in the dam, and then you can impound the water 11 feet more by the superstructure?

Mr. COOPER. Yes, sir.

Mr. TREADWAY. Forty feet in low-water period?

Mr. COOPER. Yes, sir; and we had to fill the lake 40 feet high to take care of it.

Mr. TREADWAY. You do impound the water to the height of 40 feet in low water?

Mr. COOPER. That is just exactly what we do.

Now, upon the question of whether or no the Mississippi River Power Company has been of any benefit to anybody, the statement was made here yesterday by the honorable Congressman from Illinois, that he had never heard of any benefits from the Mississippi Power Company. The first great benefit is the saving of a million tons of coal per annum. The next benefit has been the reduction in rates in St. Louis—three reductions—from 10 cents to 7 cents a kilowatt-hour.

Mr. SMALL. Is it your statement as to the saving of coal that if it were not for your power company it would require a million tons of coal?

Mr. COOPER. It would require a million tons of coal to produce the power we are generating.

Mr. SWITZER. That is, annually?

Mr. COOPER. Annually. In the city of Keokuk the price power has fallen from 15 cents per kilowatt-hour to 8 cents per kilowatt-hour. Other cities have been benefited about the same proportion.

Under the old system the Government had three locks to take care of and 9 miles of canal, which cost them about \$40,000 a year to maintain, and now it does not cost them anything to maintain except the operation of the new lock. The entire dredging business is done away with.

It is estimated by the Government that this transition from the old canal system to the present system has saved the Government in all about \$35,000 a year.

The next statement that we want to make is that we have spent \$1,800,000 on this lock and dry-dock system and have given it to the Government free, in a part of our country where coal is the cheapest of any place in the United States. Upon that \$1,800,000 we are paying interest and always will have to, until we can get business enough to amortize the payment.

The next statement I wish to make relates to the accusations that we are unfriendly to navigation.

When I took this matter up—and, by the way, it took me five years to find the money—I went to the Chief of Engineers and I said, "How big a lock will you require?" and he said, "If you will build the new lock as big as the old one, it will be quite satisfactory,"

by which I mean the plan dimension. Thereupon we got up some plans and submitted them to the Government on the old size of locks, and they were accepted by the Government and signed by the Government and turned over to me by the Government, with the Secretary of War and the Chief of Engineers' signatures.

Mr. SWITZER. What was the size?

Mr. COOPER. Ninety-five by four hundred, although the first demand of the Government was only 80 by 350. After that there was a great big howl made because the locks were not big enough. The howl started in St. Louis on the basis that the lock ought to be a thousand feet long, as they were going to build steamers for use on the Mississippi with hinges in the middle, and they wanted a lock a thousand feet long. As a result of this agitation, a second engineering board was called together, and this board asked us to cancel the first arrangement and add \$200,000 to the cost of the lock by making it as wide as the locks of the Panama Canal, which I think anybody will admit is a very excessive provision, and we did all that for nothing (even though we had previously signed up with the Government), in the interest of navigation, and in the interest of trying to be friendly with the people with whom we had to live. And yet, after all of the foregoing and a great deal more I could tell you, if I had the time, we are told by the Congressman from Illinois, who quotes from Mr. Marsh, a discharged employee of mine, that we are malefactors in this district.

I do not know that there is any other statement that I care to make. Mr. Kellogg has gone very fully into this subject, but I would be very glad to answer any questions that anybody wants to ask.

Mr. BOOHER. Let me ask you this question: As a matter of fact, you have a dam, if you call it all a dam, 40 feet high, have you not?

Mr. COOPER. No, sir.

Mr. BOOHER. Does it not impound the water to that height?

Mr. COOPER. It does.

Mr. BOOHER. The law simply gave you the right to build a dam 30 to 35 feet. You evaded the law by construing it as the law was stated by the engineers, by permitting the dam to be built 29 feet, and then this superstructure put on.

Mr. COOPER. No; that is not a fact.

Mr. BOOHER. Then why did you get this authority to put this superstructure there?

Mr. COOPER. The act required that we should build this dam with a crest up from 30 to 35 feet high.

Mr. BOOHER. Yes.

Mr. COOPER. And all dams, not only at Keokuk but practically everywhere on earth, have flashboards on the top, and these gates are simply a form of flashboards.

Mr. BOOHER. This dam was to be built 30 to 35 feet high, according to the plans and specifications then on file.

Mr. COOPER. No. There were no plans and specifications on file at all.

Mr. BOOHER (reading):

The detailed plans for the construction and operation of said dam, lock, dry dock, and appertenant weirs shall be submitted to and approved by the Secretary of War before the commencement of any operation of said work.

That was done, of course.

Mr. COOPER. That was done after the passage of the act.

Mr. BOOHER. That was done?

Mr. COOPER. Yes, indeed.

Mr. BOOHER. And, of course, they complied with the provisions of this law that the dam should not be less than 30 nor more than 35 feet?

Mr. COOPER. Yes.

Mr. BOOHER (reading):

And that said work shall be constructed under the supervision of some engineer officer of the Army designated for that purpose, and that after the approval of the said plans no deviation therefrom shall be made without the prior approval of the Secretary of War of any such deviation.

Now, you have got the deviation for a 29-foot dam and the superstructure on top?

Mr. COOPER. No.

Mr. BOOHER. You never had any authority from anybody to put that superstructure there.

Mr. COOPER. We had authority from the Secretary of War and the Chief of Engineers.

Mr. BOOHER. That was a deviation, was it not?

Mr. COOPER. No; it was not a deviation. It was an elaboration of the plans according to the usual practice in such cases.

Mr. BOOHER. Can you give this committee any reason why that was not made known to Congress or why it was not made public; in other words, why it was kept quiet?

Mr. COOPER. I certainly do not know anything about the meanderings of Congress or anybody else; all I know is about my own business.

Mr. BOOHER. I am not asking you about the meanderings of Congress, but I am asking you about the meanderings of the water power company, and why that matter was kept quiet.

Mr. COOPER. It has never been kept quiet. We advertised the fact all over the United States at the time we financed this thing.

Mr. BOOHER. It was only yesterday that the people knew about this.

Mr. COOPER. I am not responsible for the ignorance of other people.

Mr. BOOHER. No; that is not right to hold anybody responsible for that.

Mr. COOPER. You could not, very well, could you?

Mr. BOOHER. Do you mean to say, now, Mr. Cooper, that that dam was built in accordance with the provisions of this law?

Mr. COOPER. I certainly do say so.

Mr. BOOHER. Why did you get permission to build the dam 29 feet high?

Mr. COOPER. What do you say?

Mr. BOOHER. Why did you get permission in the law to build this dam 29 feet high?

Mr. COOPER. According to the statement of the law—you mean there is a difference between 29 and 30 feet?

Mr. BOOHER. Why did you get it down to 29 feet?

Mr. COOPER. Because we could not pay the damages for 30 feet of water.

Mr. BOOHER. Did the Board of Engineers permit you to do that?

Mr. COOPER. Oh, certainly.

Mr. BOOHER. Through the Secretary of War?

Mr. COOPER. Yes, sir.

Mr. BOOHER. You are really maintaining a dam there that impounds water 40 feet high?

Mr. COOPER. Yes, sir; in low water.

Mr. BOOHER. Does not that cause more overflow than a 30 to 35 foot dam?

Mr. COOPER. No; it causes very much less overflow, because if we built it up to the higher level you speak of we could not take it out when the flood came along.

Mr. BOOHER. Was it absolutely necessary to make these changes in order to make it practical?

Mr. COOPER. Absolutely necessary. And when we came to the consideration of the advantages to navigation and the advantages of a fixed pool level, it was considered by everybody out there as a good thing.

Mr. TREADWAY. In other words, is this the situation: You keep the level of the pool at high-water level——

Mr. COOPER. The same as low water.

Mr. TREADWAY. Could you keep it at the height that it would be in flood period if you did not have this crest on it?

Mr. COOPER. No.

Mr. FREAR. Is that for the year around, substantially?

Mr. COOPER. Yes, sir; as near as we can hold it.

Mr. FREAR. So that, irrespective of whether low water or high water, you maintain that?

Mr. COOPER. People talked about the advantages to navigation of having a shore line of regular height for boats to land on.

Mr. FREAR. So that at the lowest stage of water you preserve that same height?

Mr. COOPER. Yes, sir.

Mr. FREAR. Also letting through the amount of water that will be necessary to maintain that?

Mr. COOPER. Yes, sir.

Mr. FREAR. And also at flood times?

Mr. COOPER. Yes, sir.

Mr. FREAR. So that there are no benefits to navigation below the dam effected by the releasing of any water down there at any time, is there?

Mr. COOPER. Oh, yes; there is.

Mr. FREAR. How does that preserve the same height of water the year around?

Mr. COOPER. For instance, to get right down to a concrete example, supposing the natural flow in the summer time was below 20,000 second-feet, and we had the equivalent 4,000 second-feet for 20 days stored in behind the dam. The Government would come along then and say, "You must increase the natural discharge of the river by letting out some of that impounded water," and on the plans they have approved they have certified that they may always have the right to draw the water down to an elevation of 519, in the interests of navigation.

Mr. FREAR. But, they have never done that?

Mr. COOPER. They have never had occasion to.

Mr. TREADWAY. Except when the Government engineers wanted water for the navigation of their own boat?

Mr. COOPER. Yes; and I think the point was not brought out, but it is entirely possible that this much-maligned plant of ours did in this particular case let down a great deal more water than the natural flow of the stream would have yielded, in order to help a boat down whose draft was especially deep.

Mr. TREADWAY. In respect to the water in Cooper Lake there, where do you get your basis or your data on which you consider this 40 feet as high water; is it a flood period every year, or is it the highest thing that has ever occurred?

Mr. COOPER. 1855.

Mr. TREADWAY. It is on that basis that the height of the pond is at 40 feet?

Mr. COOPER. Yes, sir.

I would like to make in conclusion one statement. If the committee will fully inform itself it will find the history of the Mississippi River Power Co. in the place it is known the best, full of very strong endeavor on our part to be more than fair with everybody in that valley, and all you have to do to find out about us is to talk to 95 per cent of the people where we live, and we will rest our entire case on the question of being fair to navigation and fair to everybody on the facts.

Mr. FREAR. How do you account for the fact that all steamboat men and pilots agree that the conditions exist, as they say, on the river and attribute it to the dam?

Mr. COOPER. The most charitable view I can take of that is that they are mistaken, and if this committee, in the interest of simple justice, will have all the facts brought before them, they will find that the abnormal conditions which you saw were produced by an abnormal flood period, which plowed up a great big set of new sand bars, which phenomena are most normal, and after these new bars were so made it took a little time for the water to wash its way through there, and you came along at a time when they had not cut through.

Mr. FREAR. Then you take issue with the Chief of Engineers that the channel was never as good?

Mr. COOPER. I have not any knowledge about that.

Mr. FREAR. That is the statement he made before the committee.

Mr. COOPER. That may be true.

Mr. FREAR. I was interested because of this experience.

Mr. COOPER. The other feature on this same point. We could not have impounded water at the time of this trouble if we wanted to, because the quantity in the river was more than we could use; after we get the pond full we would have to let it through, whether in the interests of navigation or not.

Mr. FREAR. What do you use ordinarily?

Mr. COOPER. I suppose around 15,000 or 16,000 second-feet.

Mr. FREAR. Is that the maximum you are using?

Mr. COOPER. Fifteen thousand or sixteen thousand second-feet.

Mr. FREAR. That is for creating the 110,000 horsepower?

Mr. RAINEY. I would like to reply to Col. Cooper. I have said a great many things about the colonel's enterprise. Inasmuch as he

has only denied some of the things I have said, I am assuming the rest are true.

Mr. COOPER. I will not agree to that in advance. I was so confused by your statements yesterday that I could not remember them all.

Mr. RAINEY. In the first place the colonel says that the statement I have made that the Keokuk Dam is owned in England is not true. I never made any such statement as that.

Mr. COOPER. I thought you said that.

Mr. RAINEY. I said you financed it in England after you obtained your contract in St. Louis.

Mr. COOPER. You are misinformed about that. We did not do that.

Mr. RAINEY. I understand that you own 25 per cent of the stock.

Mr. COOPER. You are also incorrectly informed as to that, because that has never been the case and is not now.

Mr. RAINEY. Or did recently?

Mr. COOPER. I never did in my life.

Mr. RAINEY. I understand that Stone & Webster control 25 per cent and the rest is owned in England.

Mr. COOPER. That is likewise incorrect.

Mr. RAINEY. Where is the rest of it owned?

Mr. COOPER. It is owned all over the United States.

Mr. HUMPHREY. I do not think this is material to the issue.

Mr. RAINEY. I do not think this is material to the issue, still I do not understand why the colonel advertised the project and at least attempted to float his bonds in England. As to the amount of power that can be created there, the Keokuk enterprise started out with a statement that they could develop 300,000 horsepower.

Mr. COOPER. I beg your pardon, but that is not correct.

Mr. RAINEY. Have you in your possession all of that illustrated literature you sent out when you were financing this enterprise?

Mr. COOPER. If the chairman please, I would like to say that never in my life have I said any such thing, neither has any other officer of the company. Somebody has been imposing upon you, Mr. Rainey.

Mr. RAINEY. I will find it if you will furnish me all the illustrated literature you sent out.

Mr. COOPER. You can not find such a thing as that.

Mr. RAINEY. The Chief of Engineers has not imposed upon me. I read into the record yesterday his letter which states that you can only develop there at low water less than 80,000 horsepower. That letter was written a year ago.

Mr. KENNEDY. If you will pardon me, I called up the Chief of Engineers, and he replied that that letter does not mean what you said it does.

Mr. RAINEY. The letter speaks for itself. The Chief of Engineers said that by impounding you could only develop 104,000 horsepower. Stone & Webster, who have control of the enterprise now, state here in their book that you can develop approximately 200,000 horsepower, which is more than any of your representatives have claimed here during this hearing.

Mr. COOPER. May I answer that right here?

Mr. RAINEY. I have the book here, and that is all I know about it.

Mr. HUMPHREY. This whole thing is immaterial, but I think we might as well hear both sides.

Mr. COOPER. We can develop 216,000 horsepower, and if this committee has patience we can show how we can develop 235,000 horsepower.

Mr. RAINEY. That is the largest amount you have claimed so far. Mr. Cooper states that they reduced the rate in the power zone for electricity per kilowatt-hour from 15 to 8 cents in Keokuk, and substantially the same throughout the power zone.

Mr. HUMPHREY. What does the cost of power have to do with navigation of the river? He made his statement, and he contradicted you squarely.

Mr. RAINEY. In reply to the statement of Col. Cooper, I understood him to state that proportionately that was true throughout the power zone.

Mr. COOPER. There have been substantial reductions.

Mr. RAINEY. I get power from the Keokuk Dam myself. I have the receipts here. The Keokuk Dam Co. sells to the Central Illinois Public Service Co.

Mr. COOPER. But that is incorrect. I beg your pardon, but we do not own a dollar of stock in any utility company that is selling power to Keokuk, in your own town or any other.

Mr. RAINEY. You have not reduced the cost of power where these distributing companies operate, because I paid, as far back as 1907, before the dam was completed, for lights in my house 20 cents per kilowatt-hour, with 30 per cent reduction. I am now paying 14 cents per kilowatt-hour, and it comes from the Keokuk Dam, with 1 cent per hour reduction, practically exactly the same thing. There is some reduction now, perhaps, to the larger consumers and a few users of power in that zone.

Mr. COOPER. We have not any more control of that than we have of the wind blowing by the Capitol.

Mr. RAINEY. So far as the saving of coal is concerned and reducing the price of power, in Hannibal, Mo., which is just a few miles from the dam, they produce power per kilowatt-hour out of coal and sell it at 5 cents per kilowatt-hour, 3 cents cheaper than it is sold a few feet from the dam in the city of Keokuk, Iowa. That is true?

Mr. COOPER. No, sir; it is not true. We have told you in all good nature and in full knowledge of the fact that we sell power for half a cent per kilowatt-hour, and you can buy all you want, and that is less than it is at Niagara Falls, and there are no go-betweens, either.

Mr. RAINEY. But you are selling to a distributing company at that rate.

Mr. COOPER. Oh, no; the people are using it themselves.

Mr. RAINEY. Do you sell in Keokuk for half a cent?

Mr. COOPER. We have; yes.

Mr. RAINEY. I thought you said you sold at 8 cents in Keokuk?

Mr. COOPER. That is little distributed power, but what we get paid for is the manufactured power in large units; we receive half cent a kilowatt-hour.

Mr. RAINEY. I thought the issue you took is whether or not you benefited the public generally, and I say over there in Hannibal distributed power delivered to the ultimate consumer costs 5 cents per kilowatt and is generated out of coal.

Mr. COOPER. That has nothing to do with the fact that we are selling power at a half cent per kilowatt-hour, has it?

Mr. RAINEY. It simply shows you are not the public benefactor you claim to be when a few miles from the dam out of coal a municipal plant develops power and distributes it to the ultimate consumer at 5 cents per kilowatt-hour, and the distributing company there in Keokuk, Iowa, distributes the power generated a few feet away at your dam for 8 cents per kilowatt-hour. Those conditions prevail all through that section. I have here—and I will not trouble the committee with it, but I will print them in the record—complaints from mayors of cities within the power zone, every one of them complaining about the power they get and complaining they get it no cheaper.

Mr. HUMPHREY. Why should you want to put it in this hearing?

Mr. RAINEY. I do not want to put it in here.

Mr. HUMPHREY. There is a contest existing between these two parties, litigation now pending in court, and I can not understand why you want to put a lot of this kind of matter in the record.

Mr. RAINEY. I do not want to put a lot of this kind of matter in; I simply reply to what the colonel said about me.

Mr. HUMPHREY. What has what they sell the power for got to do with the navigation of the Mississippi River?

Mr. RAINEY. The question is whether this company has the right to interrupt navigation when it is not doing anybody any good.

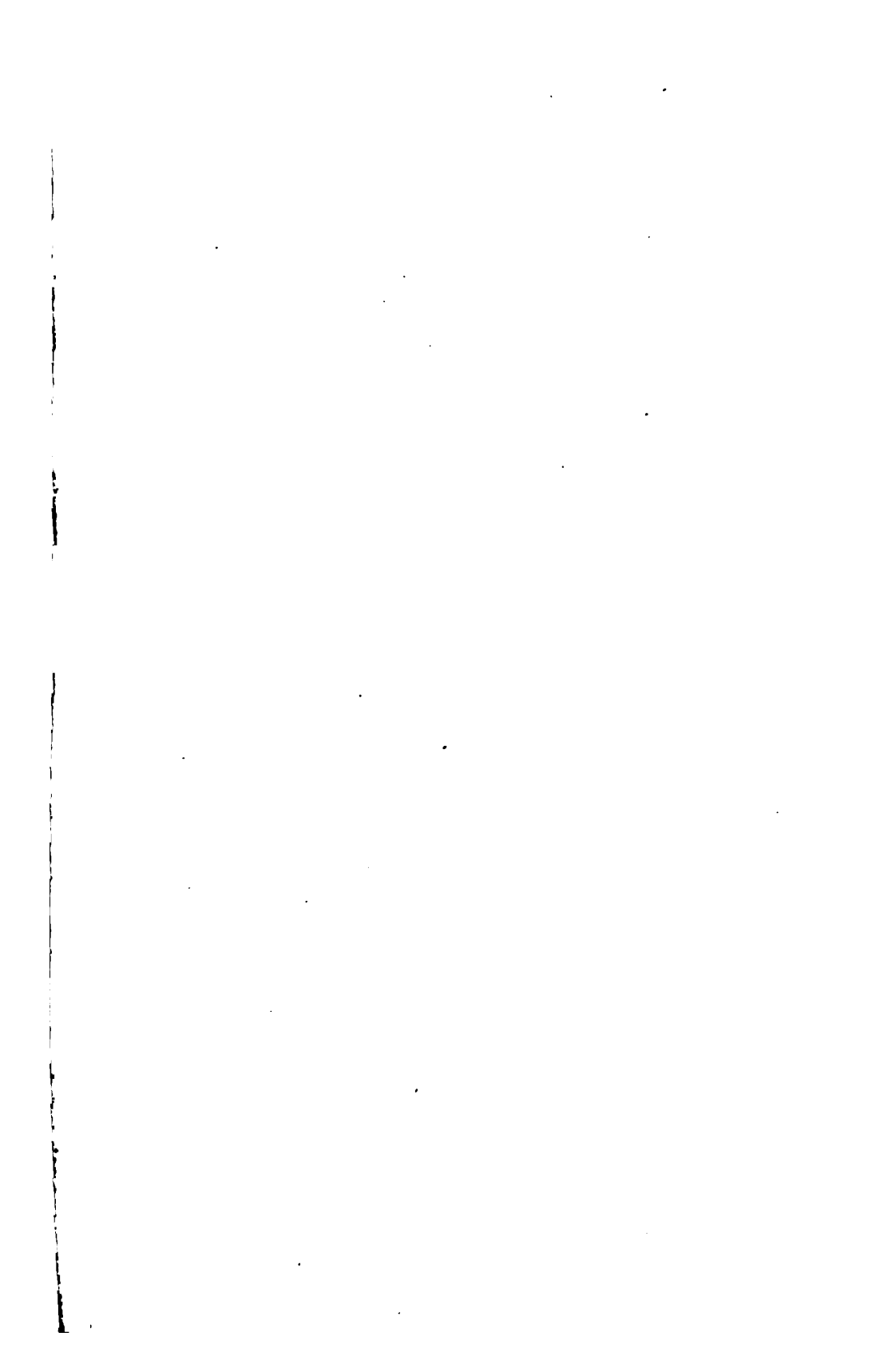
Mr. HUMPHREY. They ought not to interrupt navigation even if they are benefactors.

Mr. RAINEY. You are absolutely right about that.

Mr. BOOHER. You claim it was on account of interrupting navigation and Capt. Cooper claimed it was on account of the operation of the dam.

Mr. SMALL. This closes the hearing, as I understand it, unless some one else desires to be heard. I understand that Capt. Streckfus desires to file a supplemental statement, and if he will prepare it and hand it to the stenographer it will be inserted.

(Thereupon, at 1.05 o'clock p. m. the committee stood adjourned to meet at the call of the chairman.)



MISSOURI RIVER AT AND NEAR GLASGOW, MO.

• HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF MISSOURI RIVER AT AND NEAR GLASGOW, MO.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FOURTH CONGRESS

✓ CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman*.

GEORGE F. BURGESS, Texas.
CHARLES G. EDWARDS, Georgia.
JOHN H. SMALL, North Carolina.
CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
DANIEL A. DRISCOLL, New York.
THOMAS J. SCULLY, New Jersey.
CHARLES LIEB, Indiana.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.
H. GARLAND DUPRÉ, Louisiana.
WILLIAM E. HUMPHREY, Washington.
CHARLES A. KENNEDY, Iowa.
ANDREW J. BARCHFELD, Pennsylvania.
ROBERT M. SWITZER, Ohio.
ALLEN T. TREADWAY, Massachusetts.
JAMES A. FREAR, Wisconsin.
DOW H. DRUCKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk*.
JOSEPH H. MCGANN, *Assistant Clerk*.

JANUARY 19, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

MISSOURI RIVER AT AND NEAR GLASGOW, MO.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 19, 1917.

The committee met at 10 o'clock a. m., Hon. Stephen M. Sparkman (chairman) presiding.

The CHAIRMAN. Mr. Hamlin, we will be glad to hear you now.

STATEMENT OF HON. COURTNEY W. HAMLIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSOURI.

Mr. HAMLIN. Mr. Chairman and gentlemen of the committee, I want first, not only on my own account but on account of the gentlemen who are here, to thank you for calling this meeting to accommodate them. They have a little matter that they would like to present to you which they regard as vitally important to themselves in the community they represent. It is in regard to a bend on the Missouri River at or near Glasgow. The river there is threatening to cut through and cut off some 7 or 8 miles of river and destroy millions of dollars' worth of property, to say nothing of the effects that it would have upon navigation. I am not an expert, but I understand that if it were to cut through the current would be so severe as to interfere seriously with navigation.

The CHAIRMAN. What place is that?

Mr. HAMLIN. Glasgow, Mo. Now, I shall not explain that, because there are three gentlemen here whom I desire to present to the committee. Col. De Witt was for 20 years connected with the Government in this work. He is not only competent to speak from his experience and knowledge as an engineer as to this kind of work, but also as to this particular project. Then we have Mr. Nivert, of Glasgow. He has lived there nearly all his life. Mr. Herider lives just on the other side of the river and is familiar with the situation. These gentlemen are so much better fitted to explain this proposition that I will give way now and introduce to the committee Col. De Witt. I might say that I appreciate the fact that you have closed the hearings and reported the bill. Our only purpose in this matter is that if we can convince the committee that this proposition possesses merit all that we are going to ask, if the committee is inclined to do so, is that the committee present an amendment to the bill in the House as a committee amendment, making available a very small proportion of the money that you are providing in the bill for the Missouri River, say \$25,000, or whatever you think is necessary for immediate work at this point, with the view and the idea that it would save to the Government hundreds of thousands of dollars which it will cost the Government if the work is delayed until the Government gets to this point in its usual systematic work, from Kansas City to the mouth of the river, which must of necessity be some time yet. That is all we are asking for. Now, Col. De Witt.

STATEMENT OF MR. W. R. DE WITT, OF GLASGOW, MO.

Mr. DE WITT. Mr. Chairman and gentlemen, a view of the situation is very important to have in order to understand what I have to say in regard to it. I will point out on the map the exact situation. Here is the town of Glasgow situated on the left bank of the river [indicating]. The river flows in this direction. So that it makes a right angle bend immediately above the town of Glasgow. The distance from here [indicating] to the upper end of the bend is about 5 miles. Ever since the work on the Missouri River was first started about 1880, the Army engineers recognized this as a very important piece of bank to hold, and since that time there has been spent on that piece of bank over a quarter of a million dollars. Now, last spring the river made a crossing at the upper end of this bend and started into a piece of protected bank. I should have said that this entire bank is now protected from the head of the bend to the bend by either revetments or pile dikes. But last spring the river started across here and started to eat up that revetment. There is an immense whirlpool several acres in extent which in high water takes away the bank very rapidly. We fear that the river will make a cut-off across this point of land, leaving Glasgow 3 miles inland, away from the river with no harbor, no water supply, and no sewage disposal.

Mr. HULBERT. What is the width and depth of the channel?

Mr. DE WITT. Along here it is from 6 to 10 feet.

Mr. HULBERT. How wide is the channel?

Mr. DE WITT. About 1,000 feet. It is a very good piece of river so far as navigation is concerned if the bank line is held in its present location.

Mr. HULBERT. What is the population of Glasgow?

Mr. DE WITT. About 2,000.

The CHAIRMAN. Where is Glasgow located with reference to Kansas City?

Mr. DE WITT. About 108 miles east, on the Chicago & Northern Railroad.

The CHAIRMAN. Do you mean above or below Kansas City?

Mr. DE WITT. Below, down the track, or 150 miles by river.

The CHAIRMAN. We are appropriating a large sum of money each year for the revetment of the banks of the river between the mouth and Kansas City. Why do not the engineers take care of the revetment there with some of this money?

Mr. DE WITT. When I asked it the engineers said that they will get to it with their systematic improvement in time. All that we ask now, Mr. Chairman, is not a special appropriation, not an additional appropriation, but we simply ask that you spend a little pittance there to take care of the work on which money has been spent until they can get to it with their systematic improvement.

The CHAIRMAN. Who did the revetment work there originally?

Mr. DE WITT. I was in charge of it.

The CHAIRMAN. I know, but was it the Government or local interests?

Mr. DE WITT. Both. The Government has expended \$63,000 on this stretch of bank, and local interests have spent \$216,000. Sometimes they did it jointly and sometimes the Government alone put

in some work and sometimes local interests alone did the work, just as necessity arose to hold it.

The CHAIRMAN. Is it your idea now that the Government should spend all the money in taking care of it?

Mr. DE WITT. Mr. Chairman, all that we ask now is that the Government spend about \$25,000 to prevent that river from making a new channel through there and at the same time make the necessary repairs to the present works, so that the next flood will not take them away and destroy the works that have already been put in. It is estimated that about \$25,000 will do that.

Mr. SWITZER. What is the fall from the point opposite from where it would cut through? What would be the fall in the stream where it would reenter the river again if it goes straight through?

Mr. DE WITT. The fall is about 5 feet.

Mr. SWITZER. The way it is now, that water is held in check by this bend?

Mr. DE WITT. Yes, sir.

Mr. SWITZER. It would go through with a fall of about 5 feet?

Mr. DE WITT. Yes, sir.

Mr. SWITZER. That would give it an additional velocity?

Mr. DE WITT. Yes; a velocity so great that it would be impossible for boats to navigate at all until the river adjusted itself, which would be done in time, but for a great while boats could hardly get through.

Mr. HAMLIN. Right at this point, Colonel, I think you ought to explain one point. As I understand, there is a little bayou cut in there. I do not know whether I call it by the right name, but you have a picture of it here?

Mr. DE WITT. Yes.

Mr. HAMLIN. I want you to show the imminence of its cutting in there.

Mr. DE WITT. The river is now going to work on this revetment and that is the difficulty there on this stretch of bank.

Mr. HAMLIN. Where is that?

Mr. DE WITT. That is on this little bend.

Mr. HAMLIN. As I understand it, this water flows in and begins to back up?

Mr. DE WITT. Yes, sir.

Mr. HAMLIN. And cuts a little deeper all the time?

Mr. DE WITT. Yes, sir. The river starts in at the foot of that—I call it a hole—and by eddy action is eating up the bank.

The CHAIRMAN. When did that erosion begin?

Mr. DE WITT. Some time during last spring at high water; I do not know exactly when it was.

The CHAIRMAN. You say you have applied to the engineers since then?

Mr. DE WITT. We have talked it over with them.

The CHAIRMAN. And they only replied by saying that they will get to it after a while?

Mr. DE WITT. That they will get to it in time with their systematic improvements.

The CHAIRMAN. How far are they away from it now?

Mr. DE WITT. Just this last summer immediately below the town they have spent \$50,000 in building piles and dikes right in this vicinity [indicating].

The CHAIRMAN. Have they suggested that the people of Glasgow contribute something toward the work?

Mr. DE WITT. No, sir; not to my knowledge.

The CHAIRMAN. Do they not have contributions from parties along the banks where property is to be protected?

Mr. DE WITT. That has been done in several instances, yes.

The CHAIRMAN. You have not offered to contribute anything?

Mr. DE WITT. No, sir. We have not made a definite offer of that kind.

Mr. BOOHER. Colonel, how far is it around that bend, commencing at the point where the cutting is now and clear back to where the river would reenter again?

Mr. DE WITT. It is about 10 miles.

Mr. BOOHER. Now, how far would it be across if the river cuts through?

Mr. DE WITT. About 5 miles.

Mr. BOOHER. Just about half the distance?

Mr. DE WITT. Yes. It may be just a little more than double around this way than it is across.

Mr. BOOHER. Now, it has got 5 miles to cut before it gets through? It has got 5 miles of land to cut through before it makes a new channel clear across?

Mr. DE WITT. Yes, sir.

Mr. BOOHER. How much of that distance has it cut since the erosion began?

Mr. DE WITT. Now, if you will understand, the cutting of that land does not take place by beginning at the head of it and eating it up foot by foot, but the stream flows over the entire 5 miles, and as quickly as the water can take it out it cuts out the land. It can cut it out like it did at Camden, in one night.

Mr. BOOHER. It could not cut 5 miles in one night?

Mr. DE WITT. Yes; in one night. That was what was done at Camden in a situation almost identical with this.

Mr. BOOHER. What kind of soil is it there?

Mr. DE WITT. It is a sandy soil, almost all sandy.

The CHAIRMAN. What are the topographical features in the stretch between the bend and the other side of that land area?

Mr. DE WITT. This is bottom land, and from here to Glasgow is bottom land [indicating], about 18 feet on an average above what is called standard low water.

Mr. HAMLIN. Now, there is a little stream there?

Mr. DE WITT. Yes. I was going to say that there are streams that come in here that almost invite the river to make that crossing. When high water obtains, the stream flows into this stream, taking a turn across there [indicating] and inviting the river to make that channel.

Mr. BOOHER. Is that crooked mark on the left of your map running down south where you expect the river to cut through?

Mr. HAMLIN. No; that is the bluff line.

Mr. DE WITT. Yes; that is the bluff line.

Mr. BOOHER. Where is the indication that the river will eat away—down across that bluff?

Mr. DE WITT. Yes; not immediately at the bluff, but possibly 700 or 1,000 feet from it, the indication is that it will go across there.

Mr. BOOHER. That is about half way across the bend, then?

Mr. DE WITT. Well, not quite half way across the bend. It is one-quarter of the way.

Mr. BOOHER. One-quarter of the way from the bend?

Mr. DE WITT. Yes, sir.

Mr. BOOHER. How much land will there be in that triangle which you have marked off there?

Mr. DE WITT. Well, sir, I never figured that. I have never estimated it.

Mr. HERIDER. About 6,000 acres.

Mr. DE WITT. Have you estimated that, Mr. Herider?

Mr. HERIDER. Yes.

Mr. BOOHER. If the river goes through there, it will be almost all destroyed?

Mr. DE WITT. Yes, sir.

Mr. BOOHER. If the people own that land, do you not think they ought to do something to protect it?

Mr. DE WITT. Well, you know what farmers will do.

Mr. BOOHER. Yes; I have had some experience along that line. It will take them a number of years to raise \$15,000.

Mr. DE WITT. I have seen instances along the river where farmers have raised \$15,000 or \$20,000 to protect their farms, but it is a rare instance.

Mr. BOOHER. If you people could contribute what you could there, the city and the people outside, you might induce the engineers to put up one-half or two-thirds of it and get your work done?

Mr. DE WITT. Yes, sir.

Mr. BOOHER. We did that in my district. We have contributed \$40,000 or \$50,000 just to prevent a thing of that kind.

The CHAIRMAN. Have you laid the matter before the Chief of Engineers here, Colonel?

Mr. DE WITT. We have talked it over with him.

Mr. HAMLIN. Mr. Chairman, I think I can answer that question. The Chicago Northwestern Railroad runs right along the river. The Chief of Engineers contends that the Chicago Northwestern Railroad ought to protect the river banks; that they will have to protect it. That is the whole story. They say, "We will attend to this when we get to it, but in the meantime the Chicago Northwestern Railroad will have to protect them," because this road runs across the river at Glasgow, running south to the river along here [indicating], and that they can not afford to let that river cut through there. That is the whole thing in a nutshell.

The CHAIRMAN. Is that a good argument or not?

Mr. HAMLIN. Well, I doubt the feasibility of it because I am informed that the Chicago Northwestern Railroad Co. says that it will be cheaper for them to build another bridge and let it go if the river cuts through; that it will be cheaper to do that than revet the banks and dike them.

Mr. EDWARDS. The railroads might contribute something.

Mr. HAMLIN. Well, I think they would be willing to do that, but we could not make them do it. If they can build a bridge before the river cuts through, the people will have to suffer.

The CHAIRMAN. But what will the railroad do in the meantime? It will stop the traffic for a while?

Mr. HAMLIN. Yes, but they can detour their trains like they do once before.

Mr. DE WITT. Yes; that has been done several times.

Mr. HAMLIN. I passed through that part of the country when they had the dikes, and the railroads just made a detour north of the river when they could not use their own lines. They could easily do that until they built a bridge. Now, Senator Stone and Senator Reuben went down to see Gen. Black at the War Department, and when he was said and done he just simply said, "Let the railroad do it until we can get down there."

Mr. BOOHER. What is the value of land down there?

Mr. DE WITT. About \$150 an acre.

Mr. BOOHER. What do they raise?

Mr. DE WITT. Wheat, corn, cattle, and hogs.

Mr. BOOHER. About how much shipment is there from your town—the tonnage? What tonnage do you receive annually?

Mr. DE WITT. Well, I have no statistics to give you of that kind. Kansas City has operated several boats from Kansas City to St. Louis for several years, but I have never learned exactly what they did carry. But they go both ways loaded. They stop at Glasgow and deliver some freight and take on some freight, but I have no statistics.

Mr. HULBERT. Is it a regularly established line that operates from Kansas City to St. Louis?

Mr. DE WITT. Yes, sir.

Mr. HULBERT. And it makes stops at both places?

Mr. DE WITT. Yes, sir.

Mr. BOOHER. Capitalized at a quarter of a million dollars.

Mr. HULBERT. The people of Glasgow would feel the loss if the character of the river was so changed that the boats could not stop at Glasgow?

Mr. DE WITT. Yes. It would reduce the value of property in the town 50 per cent. Nobody would want to live there; I know I would not want to live there in that case. Now, on the map, here is the Sheridan River, a small, sluggish stream emptying into the Missouri River immediately above the town.

Mr. HULBERT. What manufactures have you there?

Mr. DE WITT. The only factory we have is a flour mill, manufacturing flour. We have not any other factory. It is mainly a farming community. There is very rich land both in Saline County and Howard County. But I am satisfied that the Chicago and North Western Railroad has spent three-fourths of the money that has been spent along that bank already. They have repeatedly gone there and made improvements. In 1901 they built a mile and a half of riverment that must have cost \$10 a foot.

The CHAIRMAN. Have they a bridge across the river at Glasgow?

Mr. DE WITT. Yes, sir. Right there [indicating].

The CHAIRMAN. Where does the line run on the other side of the river?

Mr. DE WITT. Right along here on the map [indicating].

The CHAIRMAN. I mean on the hills.

Mr. DE WITT. It goes from there to Chicago and another branch to St. Louis.

The CHAIRMAN. Is there anything else you would like to say?

Mr. HAMLIN. I might explain one thing that I do not think Col. De Witt made quite clear in answer to your question. Glasgow is on a hill, on a bluff. The railroad crosses just below the town and then runs back into the higher country, on to the hilly country or plateau to the east. Here is the low place right in this bottom between the two bluffs [indicating].

The CHAIRMAN. Captain, that was formerly the river bed, was it not?

Mr. DE WITT. Well, the river has been over that entire valley, from bluff to bluff, at different times in the history of that country. I do not know anything else that I could say to throw light on the subject, but I would like to say that we do not ask any additional or especial appropriation.

The CHAIRMAN. Yes, I know what you want. You want a diversion of a portion of the fund to be appropriated for the river?

Mr. DE WITT. Just a small proportion, to take care of the quarter of a million dollars worth of work that is now there until the systematic improvement can get to it.

Mr. EDWARDS. Has the cost of the proposed work to mend that cut been estimated by the engineers?

Mr. DE WITT. Not that I know of.

Mr. EDWARDS. Are you an engineer?

Mr. DE WITT. Yes, I was in the Government service for 20 years.

Mr. EDWARDS. As a Government engineer?

Mr. DE WITT. As a civilian engineer under the Army officers.

Mr. EDWARDS. What is the estimated cost for cutting that off?

Mr. DE WITT. About \$25,000, about \$14,000 to be spent immediately at this point, of which I have a photograph [indicating], and about \$11,000 to take care of the balance of that work and keep the river from taking it away.

Mr. EDWARDS. You discussed this matter with the Army engineers and they agreed with your view about it?

Mr. DE WITT. Well, I discussed it with them but the question of estimated cost did not come up.

Mr. EDWARDS. But I mean they agreed that it can be done in the way you suggest?

Mr. DE WITT. Yes; and also that it should be done. They go that far.

Mr. EDWARDS. And it would cost about \$25,000 to hold that cut?

Mr. DE WITT. Yes; to hold that cut, to maintain that work in condition until they can get to it by their systematic improvements. If this little money is not spent, the probability and almost the certainty is that they will have to spend four or five times that much to get back what we have to-day. That is why we ask this little money to hold what we have until they can get to it.

Mr. EDWARDS. It is a case of a stitch in time?

Mr. DE WITT. Yes; exactly.

The CHAIRMAN. Is that all you have?

Mr. DE WITT. That is all I have to say. I thank you.

Mr. HAMLIN. I would like to introduce Mayor Nivert, of Glasgow.

STATEMENT OF MR. W. B. NIVERT, MAYOR OF GLASGOW, MO.

Mr. NIVERT. Gentlemen, my interest in this matter is on account of being the executive of the city of Glasgow, owning property there and being in business there. My interest in the matter is strictly from a Glasgow standpoint. I might say in connection with this that Mr. De Witt came to me probably last April and called my attention to the importance and the necessity of some work being done at this point. He claimed it was a very critical proposition. I went over and investigated it myself and also had it investigated by a very competent engineer. He told me practically the same thing that Mr. De Witt had told me, that unless it was attended to in the very near future it would undoubtedly make this cut through here leaving Glasgow approximately 4 or 5 miles from the river.

Now, gentlemen, we have a \$50,000 water and light plant at Glasgow municipally owned, and if the river made the cut we would lose place for the disposal of our sewage. More than all else, we would lose the harbor at Glasgow. We have found since the boat line has been started at Kansas City that we can ship freight to either St. Louis or Kansas City at a saving of 25 per cent, 35 per cent, or even 40 per cent. That is a very great item for us who ship from Glasgow. Personally, I am in the automobile and harness business, and we ship annually an average of 20 or 30 carloads of freight. A saving on the shipment of 25 per cent to 45 per cent would mean a great deal to us and correspondingly to all other business men in Glasgow. But one of the biggest points is our \$50,000 municipally owned electric light and water plant which this cut would practically eliminate. This cut, after it was started by the river, within possibly two days made a cut 400 feet long and 200 feet wide.

Mr. EDWARDS. Why would that eliminate your water plant?

Mr. NIVERT. Because if the river cuts through here we would be left on an inland lake.

Mr. EDWARDS. You would get water from the other river?

Mr. NIVERT. No, sir; not if you knew that stream. We could not possibly use the water from that stream under any circumstances.

Mr. EDWARDS. What is the population of Glasgow?

Mr. NIVERT. About 2,100. We have no manufactures to speak of, but we are in the most fertile agricultural section of the State of Missouri. We are in the corner of Saline, Franklin, and Howard Counties.

The CHAIRMAN. How often does the water cover that intervening stretch of land between the two rivers?

Mr. NIVERT. Very seldom. In 1903 the cut was made and a lake was formed.

The CHAIRMAN. Is there a lake at that place now?

Mr. NIVERT. Yes; that is where the town of Slater gets its water.

The CHAIRMAN. As I understand it, there is no danger at all until that space is overflowed by water?

Mr. NIVERT. Of course, the danger is always at high water, but the river within two days could cut a place 400 feet long and 100 feet wide, it looks to us a very serious proposition.

The CHAIRMAN. I understood the captain to say that the trouble was not from gradual erosion but from overflows, which in one night

might wash out a new channel. Now I understood you to say that does not often happen?

Mr. NIVERT. Well, no; it does not happen very often so far as overflowing the entire lower bottom is concerned. In the last three or four years we have had high water that has overflowed at different points in here [indicating] but not the entire bottom. The cut was made through in 1903, and that is the only time to my knowledge that the river has ever gone through and changed its course.

Now, immediately after I realized the seriousness of it, or thought I did, I took this matter up with Col. McIndoe, at Kansas City, and he told me that it was the most important stretch of river between St. Louis and Kansas City on the Missouri River, and that the navigation depended on them holding this stretch of river. Now Col. McIndoe, I was very sorry to find out, was not the officer in charge of this district, because if he had been in charge of this district the work would have been recommended and started by the Army engineers. He realized the importance of that work and he told me that it was a most important piece of work.

The CHAIRMAN. How high are the banks along there?

Mr. NIVERT. What are they, Mr. De Witt?

Mr. DE WITT. Eighteen feet.

The CHAIRMAN. That is, 18 feet on an average at low water?

Mr. DE WITT. Yes; it averages from 14 to 18 feet.

Mr. NIVERT. There was a mass meeting last May attended by 600, 700, or 800 people, citizens of this vicinity, mostly farmers and citizens of the towns of Slater and Marshall. At that time we were selected as a committee to take up this matter with Gen. Black at Washington. We came here to see Gen. Black and we had an interview with him, accompanied by Senator Stone, Senator Reed, and Mr. Hamlin. Gen. Black at that time promised us an investigation of the river by Col. Townsend, who is the commanding officer at St. Louis. The committee made an engagement with Col. Townsend and met him in St. Louis. We found that Col. Townsend was absolutely the man who was blocking this deal. Col. Townsend told us to our faces that this was a chance for the Government to save some money; that if the Government did not do this work, the Chicago & North Western Railroad would be forced to do it and thereby the Government would save some money. He told us that to our faces, and he gave us to understand that the Government would not do this work because the Chicago & North Western Railroad Co. would have to do it. Now, the Government, with their systematic improvement, claims that they will get to that piece of work in time. Last spring the Government, recognizing the importance of that work, came below Glasgow and spent \$50,000 in a piece of work that may have been necessary for navigation but is not as critical as this piece of work. If the river cuts through, the river at this point will be absolutely worthless.

Now, you spoke a few minutes ago about the railroad company. I find on investigation, and I know it to be accurate, that the Chicago & North Western Railroad Co. and other interests, both in Saline and Glasgow, have spent \$216,000 in the last few years on this little stretch of bank, as against \$63,000 spent by the Government. So that we have undoubtedly done our part on this stretch of river.

The CHAIRMAN. Well, maybe the Government has done its duty too.

Mr. NIVERT. Well, possibly so.

The CHAIRMAN. Of course, I do not know; it is hard to say how much should be spent by each one, but if the railroad has its track there, it seems it should do something; what is the distance from the city to the bluff—about 5 miles?

Mr. NIVERT. About 5 miles; yes, sir.

The CHAIRMAN. It would appear to be their duty to spend some of that money to keep the track in condition.

Mr. NIVERT. Their track does not run along the river all the way. It is parallel but it does not run all the way along. The matter resolves itself into this: That if the Chicago & North Western Railroad Co. refuses to do this work, we are the sufferers.

The CHAIRMAN. Of course, I do not know, but it occurs to me that the engineers have that matter pretty well in hand. They have already been up there and have expended money which would be lost if they permit the channel to be diverted. Now, the chances are that they are not going to permit that to be done.

Mr. NIVERT. Mr. Chairman, if the people around there have spent \$216,000 and the Government \$63,000, have we not done our part?

The CHAIRMAN. Well, likely you have; that was in the original work but when, however, we come to protecting it, I do not know just how to answer the question offhand because I do not know precisely what the obligation of the Government is on the one hand and that of the people on the other. I am not much impressed with the idea of throwing too much of the expense upon localities or cities in improvements for the purposes of navigation, because the municipalities have a hard time raising money by taxation at times. The people in cities and towns are heavily taxed for local purposes. The same is true for State and county taxes.

Mr. NIVERT. Mr. Chairman, we were not terribly alarmed about this situation until the situation at Camden developed. That is an identical proposition as regards the situation at Glasgow. Camden was cut through and the engineers had it in hand. The Government had the situation in hand, but when the cut came it left Camden 3 or 4 miles from the river.

The CHAIRMAN. When was that?

Mr. NIVERT. Some time last year, about eight months ago.

The CHAIRMAN. Is that on the Missouri River?

Mr. NIVERT. Yes, sir.

The CHAIRMAN. Are they doing anything to remedy that now?

Mr. HAMLIN. It is too late to remedy that now.

Mr. DE WITT. That is also true of the river at Wellington.

Mr. HULBERT. You have seen this photograph, have you not?

Mr. NIVERT. Yes, sir.

Mr. HULBERT. Do you know how long ago this revetment work was done?

Mr. NIVERT. Mr. De Witt can answer that.

Mr. DE WITT. That was done in 1901, that particular piece of revetment.

Mr. HULBERT. Is that the work to which you stated the railroad and local interests contributed in part \$216,000?

Mr. NIVERT. Yes; that is part of that work.

Mr. KETTNER. If the Missouri River was to cut through there, I believe you have stated that it would leave Glasgow 4 or 5 miles from the river?

Mr. NIVERT. Yes, sir.

Mr. KETTNER. Then, you would be compelled to do all your shipping over the railroad?

Mr. NIVERT. Absolutely all of it.

Mr. KETTNER. Then, would not the railroad be interested in seeing the river go through there if you are doing a lot of shipping now?

Mr. NIVERT. I have found from authentic sources that the railroad has surveyed locations for the past two years for other crossings of the Missouri River. There is no question in my mind but that if the railroad company is forced to shoulder this piece of work they will permit the river to go through and leave us off the river. It would be to their interest, from a freight proposition, to permit that to be done. That is all I have to say. Thank you, gentlemen.

The CHAIRMAN. Mr. Hamlin, have you another witness?

Mr. HAMLIN. I would like to present Mr. Dan V. Herider, of Slater, Mo.

STATEMENT OF MR. DAN V. HERIDER, OF SLATER, MO.

Mr. HERIDER. Mr. Chairman and gentlemen, I live at Slater, Mo., about 12 miles from Glasgow.

Mr. HULBERT. Northwest from Glasgow?

Mr. HERIDER. Yes, a little northwest. We are a little high up on the prairie and the river does not threaten our town. We have a city of 4,000 people. I became interested in it as mayor, and up to last spring I spent three years trying to get a pipe line from the river to our city to supply us with water. That pipe line comes along to about here [indicating] where there is a lake which was washed out of the river by the water pouring out and digging out this lake. That was reported by our board of health to be free of all bacteria and absolutely clear. Our pipe line comes up here [indicating] and they pump the water over the bluff and then to Slater. We are interested in this proposition because we have a \$130,000 water plant that is dependent upon this water supply. It is better water than we could get even if we took it out of the river. This water percolates through the sand and becomes purified, whereas if we had to take it from the river it would have to be treated chemically, and that would necessitate a great expense. We also are interested in this problem because here are 6,000 or 7,000 acres of the most productive land in Saline County. If this land is washed out there will be hundreds of thousands of dollars of taxable wealth taken away from our county. We are interested from that standpoint. Then in a large measure this tract of land is tributary to Slater. They do a good deal of trading at Slater. So we are interested in it from that standpoint.

Now, as to the physical conditions here, I think Mr. De Witt has explained them. There is a stream running out here [indicating]. You were talking about the Chicago & North Western Railroad. Now, I hold no brief for them. I pay my fare on their trains the same as any other citizen. I never miss an opportunity to file a lawsuit against them. I have never been employed by them in any way.

But notwithstanding I am fighting them most of the time in this way, I realize that the railroads have some rights. I think they have some rights, and when you propose to put this burden on the railroads you will simply add one more argument for the railroads for higher rates. After all, the people pay for these expenses in the end. If the railroad has to pay for all this revetment and diking, no State commission would deny to them the right to increase rates to pay for their investment. The officer told me that they could better afford to let it go through than to do the work necessary to prevent the cut. You notice how close the bluffs are together here on this map. That is where they are surveying to get a bridge from bluff to bluff and abandon the river entirely, or they can let it go through here and build another bridge.

The CHAIRMAN. Well, Mr. Herider, I would not think of contending that the railroads should be saddled with all the expense of such work as that, but when the railroad went there it perhaps went there with notice of those conditions. Later, it and the Government had to revet the banks, the one to protect its property, the other navigation.

Mr. HERIDER. \$216,000.

The CHAIRMAN. The Government spent \$60,000 and the railroad and other interests spent \$216,000. I would not place an unnecessary or unjust burden upon the road or the people there, and I think the engineers can be trusted to act justly.

Mr. KETTNER. When was the railroad built?

Mr. HERIDER. It was built in 1878, and they did not make any cut unless it was absolutely necessary. They went around through the little hills without cutting through the bluffs. I went to the town of Slater in 1879 and this river was a mile and a half north of where it is now. It has been continually cutting down and if it had not been for the work that the railroad company did, it would have gone through here [indicating] long before now. It will probably go through now in spring if we have a big river.

Now, we have talked with Col. Townsend about this work. I am going to be perfectly frank with you and say that I never found a man in all my experience so decidedly prejudiced against the railroads as Col. Townsend. The word "railroad" seems to raise up in him all the spirit of opposition that he has. He just thinks the railroad ought to do everything. Every time we would drive him into a corner on the proposition he would say, "Oh, there is no danger. The railroad will do it; the railroad will do it." And that is the only answer we got from him.

Now, I have talked to Col. McAndo at Kansas City. He does not deny the danger that exists here. He does not deny that the danger existed at Camden. But Col. McAndo is under Col. Townsend. At Camden the Government had spent about \$225,000 just below where this cut occurred, just as they are spending this money right now below Glasgow. There was no railroad at Camden.

The CHAIRMAN. Did they lose all that?

Mr. HERIDER. They are away out from the river on dry land, and they were spending all that money away down below Camden before the cut occurred.

Mr. KETTNER. Did you take this matter up before the cut occurred at Camden?

Mr. HERIDER. Oh, no. But he told me that revetment work without a levee was inefficient; that revetment work without a levee would not prevent a cut-off. I asked him if he always put a levee where they put revetments, and he said they did not. I asked him, "Where they have a levee, where they have an embankment or a levee ready-made, why not make the revetment and make the work permanent, which you say is necessary?"

Mr. SMALL. What is the concrete proposition that you are asking of this committee?

Mr. HERIDER. To amend this bill by making available for this work \$25,000 out of the \$1,000,000 appropriation that has been voted for the improvement of the Missouri River from Kansas City to its mouth, to make \$25,000 available especially for this work.

The CHAIRMAN. For revetment work?

Mr. HERIDER. Yes; and to make it permanent. It will take, as has been stated, about \$15,000 to stop this wash, and these banks are in bad repair.

Now, in regard to that photograph, I want to say that my son is a sort of amateur photographer and I had him go down there and make that picture. It is absolutely true to nature and does not tell any story. That water goes down the channel and turns to the right and goes up the stream and then back into the channel. If you have ever seen the whirlpool at Niagara, as I presume you have, you will know how that river looked when Col. Townsend was up there with us. We were in the boat there and the water was within a foot and a half from the top of the bank and the banks were caving rapidly. Col. Townsend never got off the boat at all, but stood on the deck of the boat and made his remarks. I got off the boat. They landed the boat there and the county court of Saline County and myself got off the boat, and we were afraid to get within 100 feet of that cut, from the way we saw the bank caving. You who have been on the Missouri River know that it does its cutting underneath, eating out great gobs of earth. Maybe 50 or 100 feet gets undermined before it breaks down and washes away. Recently I was down at Jefferson City, and on my return I found that a railroad sidetrack had been undermined and the train went in when the track fell through and the engineer was drowned. They were searching for him when I left there. The top of the ground was all right, but the underneath was all undermined. That is the way with this particular cut at Glasgow. The sand caves away and after a while it all breaks down and is carried away.

Mr. SMALL. You ask that \$25,000 shall be spent there for revetment work?

Mr. HERIDER. Yes.

Mr. SMALL. Where?

Mr. HERIDER. For revetment and repairs, right where this big hole is made.

Mr. SMALL. Describe it to us. Just what is the location? Suppose you were going to put it in writing?

Mr. DEWITT. It is at Cambridge.

Mr. HERIDER. Yes; at Cambridge. It is up the river from Glasgow.

Mr. SMALL. Does that name sufficiently designate it?

Mr. HERIDER. Yes.

Mr. BOOHER. How far is it from Glasgow?

Mr. HERIDER. About 5 miles. That county map will explain it. That is all I have to say, Mr. Chairman.

Mr. HAMLIN. We thank you very much for the time you have given us.

The CHAIRMAN. We are very glad to have heard you and we will give the matter careful consideration.

(Thereupon the committee adjourned.)

MISSOURI RIVER

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF MISSOURI RIVER FROM KANSAS CITY TO THE MOUTH

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
MURRAY HULBERT, New York.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.

HUBERT F. FISHER, Tennessee.
CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
ALLEN T. TREADWAY, Massachusetts.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.

DECEMBER 10, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

MISSOURI RIVER.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Monday, December 10, 1917.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. This is a hearing on the question of the Missouri River, and, I take it, primarily on that part between Kansas City and the mouth.

STATEMENT OF HON. WILLIAM P. BORLAND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSOURI.

Mr. BORLAND. Mr. Chairman and gentlemen of the committee, we are here simply to call the attention of the committee to the work that has been done on the Missouri River under the Government appropriations that have been made and the use that has been made of the river by the commercial interests in the Missouri Valley and the prospects for the future.

As to the use of that waterway, it appears that with the congestion on the railroads in the West there is an imperative need for the use of all of the inland waterways that can possibly be made available. The situation in the Missouri Valley and the Mississippi Valley is such that every available craft is now pressed into use. On the Mississippi River they are now using, after the close of the navigation season, all the Government craft that they can get for that purpose to carry coal to the Northwest, in an attempt to relieve the coal shortage. It seems to be impossible for the railroads to cope with the present traffic situation. The passenger business of the railroads, as you probably know, has been greatly curtained; the passenger service is at a very low ebb in order that the railroads may use their rolling stock, their engines, and mechanical appliances for the handling of freight. In spite of that they are utterly unable to cope with the situation.

The stretch of the river from Kansas City to the mouth has been improved with the Government appropriations, beginning in 1910, until probably between 40 and 50 per cent of the necessary work has been done, but they have not yet gotten past the point where they must contend with the difficulties of navigating an unimproved river. This last season we had assigned to the work a couple of dredge boats, which kept the channel open during a longer season than it was ever kept open before, but it is hard for anyone not familiar with the river navigation business, as you gentlemen are—it is hard for the House, and for the public, to understand the limit that is placed upon our use of the river by its state of partial improvement.

If we had an improved channel of 6 feet, a dependable channel 6 feet, between Kansas City and the mouth, the use that could be made of that river in this emergency would be of incalculable value to the country. But we are handicapped and have been handicapped up to the present time and will remain, for some little time, handicapped by being compelled to cope with the difficulties of a partially improved river. Whenever the stream is low there are shallow places where it is impossible to get a boat through which is loaded to capacity. The boats must be loaded up to one-third of their capacity which requires a large amount of cost in handling, decreased service and an increased use of labor. We ought to be able to load our boats to capacity and run them through. That is our main difficulty to-day.

It has been our great hope and wish that the improvement of the Missouri River between Kansas City and the mouth would be pushed rapidly enough to keep pace with the demands of the commercial use of the river, but it has not done so. Your committee will find, from the statements of these business men who are here, that they have made use of the river, exceeding in every way and in every year the state of the improvements as carried on by the Government. In other words, they have more than kept up with the use of the river as fast as the Government improvements would permit, and they would have been in a position to use it, and would have been very glad to have used it, to a much greater extent if the Government improvements had been carried on as rapidly as they were originally contemplated.

We understand that the estimate for this year is for \$500,000, \$100,000 for maintenance and \$400,000 for permanent improvement. That is one of the smallest estimates we have ever had, based, I think, upon the fact that there is an unexpended balance from the last river and harbor bill, which was not approved until August, which was practically at the close of the construction season last year. I think the report shows that a considerable amount of that is unexpended and, therefore, will come over to be expended in the season of 1911. However, I am inclined to think that more than \$400,000 could properly be expended and ought to be expended, in view of the present conditions of the traffic, on the improvement of the Missouri River in 1918. I am not disposed to quarrel with the recommendations of the engineers, because they are doing the best they can in allotting the money that they think will be available, but I am inclined to think that if the committee found it desirable to authorize a larger expenditure than that it could be very wisely made and I am sure that the committee desires to keep the improvement going and desires to have it carried on as rapidly as the business needs of the country will justify.

I do not intend to go into the details of this. I just simply want to call the attention of the committee to these facts, and in order to place before the House and before the country a statement of what the people of the Missouri Valley really think of this improvement. I am now going to ask the committee to hear Judge W. T. Blaine of Kansas City, one of the business men there who has pledged his own work and money and faith upon this improvement, and who understands it from the business standpoint.

Mr. KENNEDY. I notice that your commerce fell off to some extent during the last fiscal year for which we have a report.

Mr. BORLAND. I am going to ask Mr. Mackey to explain that to the committee, but I think you will find this, Mr. Kennedy: I do not know whether it is true last year or not, but the commerce originally accredited to the Missouri River included a lot of sand and gravel that was barged for a distance of a mile or more.

Mr. KENNEDY. I see the report states that out of 211,000 tons 185,000 tons were sand and gravel.

Mr. BORLAND. Yes. There is a decrease in the total tonnage. I could not, without looking at these figures and analyzing them, state whether this would be the case, but there is a decrease in the total tonnage of the Missouri River because of the fact that a large amount of sand and gravel which used to be barged on the river is not now barged on the river from the fact that the War Department has made an order keeping sand and gravel barges out of the Missouri River, and that traffic is now carried on on the Kansas or Kaw River. You will find, if I am not mistaken, that the tonnage in high-grade freight has increased; that while the total tonnage has decreased, because of the falling off of sand and gravel, that the tonnage in high-grade freight has increased. It is the tonnage in high-grade freight in which we are interested; we are not interested in the total tonnage represented by sand and gravel, but we are interested, as I say, in the increased tonnage in high-grade freight.

Mr. KENNEDY. We are not interested very much in the tonnage as represented by sand and gravel, because, as a rule, that only represents a haul of 2 or 3 miles.

Mr. BORLAND. Yes. You will probably also find that the ton-miles have increased.

Mr. DUPRÉ. I call your attention to page 1174 of the report, in which it states that—

On account of the unusual low water early in the fall, the boats on the long-distance hauls were taken out of the river the last of September and put into the Mississippi River trade between St. Louis, Mo., and New Orleans, La. For this reason the traffic was less than for the year 1915.

That is what the Chief of Engineers states.

Mr. BORLAND. Yes; I am going to ask Mr. Mackey to explain that in detail. But I recollect that the criticism was made several times by opponents of river improvements on the floor that the total tonnage on the Missouri River had decreased, and they just stopped at that point; they did not analyze the situation; if they had they would have found that the ton-miles had increased enormously; that there had been an increase of 400 or 500 per cent in ton-miles. Now, the increase in ton-miles is the only increase worth considering; that means that you are hauling a high grade of freight for a long distance and actually transacting traffic on the river, while a great increase in the total tonnage may simply result from a short barge tonnage. So I will ask Mr. Mackey—because he knows all about those details—to analyze that in particular. I want to call attention to the fact that the total tonnage is not the measure of the utility of the river; it is the ton-miles and the number of tons of high-grade freight hauled. I will now ask you to hear Judge Bland.

STATEMENT OF MR. W. T. BLAND.

The CHAIRMAN. What is your official position?

Mr. BLAND. I am chairman of the river and harbor committee of the Chamber of Commerce of Kansas City and have been, as a business man, connected with the work for the past eight years.

The CHAIRMAN. I suggest, with the approval of the committee, that you confine your remarks largely to the commerce on the river, the facilities for carrying that commerce, such as transportation lines and water terminals, and also what joint traffic there is between the water carriers and railroads.

Mr. BLAND. I shall be glad to do that and also make my remarks very brief. However, with your permission, I would like to direct attention first to the appropriation proposed in the report of the Board of Engineers.

The balance of money on hand and unexpended, I see by the report, is \$2,079,629. The amount of \$620,079, which is left for outstanding liabilities, is not included in the sum of \$2,000,000, as we understand it. That is provided for—

Mr. BOOHER. That is provided for outside of that?

Mr. BLAND. Yes, sir. The present recommendation of the Board of Engineers of \$400,000 for new work and \$100,000 for maintenance would give altogether about two and a half million dollars, and that amount of money would continue the work on the Missouri River, as is thought, until June, 1919.

We realize that it will probably be the policy of this committee and of the Government to limit expenditures, even as to the most necessary undertakings, as much as possible, and we are not hurrying upon the committee any increase of the proposed appropriation at this time. We do regret, however, that the work on the river has not been expedited. There is a reason for its dragging this year—the difficulty in securing labor. We are very greatly handicapped, as suggested by Congressman Borland, in operating upon an unfinished channel. We all realize that the depth of the channel from Kansas City to the mouth is measured by the depth of the most shallow crossings, and while the channel in many places may be 20 or 30 feet, if there are some crossings that carry a depth of only 10 feet or even less at low water, we are controlled in the loading of our barges by that shallow depth. These crossings develop in the river where the channel has not been improved, and develop for a reason of the changing current of the river, the stage of water, and other reasons. We urged upon the Government the use this year of dredge boats, and since September the water has been very, very low, but by the use of these dredge boats we have been enabled to move 3,200 tons, even over shallow water. Without the dredging thus made we could not have moved any freight during the period mentioned.

As stated by Mr. Borland, the congested condition of traffic in the mid-West is very, very bad. We have only a supply of coal in the city of, perhaps, two or three days at times, and some of our public utilities have been compelled at intervals to suspend operation. There are great many coal mines along the river and, as you gentlemen know, it is a great producing section of the country, one of the largest of the entire country, for cereals, minerals, and other sta-

and necessary products. This country and the European countries are drawing very heavily on that territory for their supplies, and the railroads are being taxed to their capacity and beyond. We are therefore very anxious to use every agency of transportation, and the Government recognizes that necessity. Brig. Gen. Black attended a recent meeting in St. Louis which a number of representative business men from different sections—the upper Mississippi, the Ohio, the Missouri, and the lower Mississippi—attended. We organized the Greater Mississippi Valley Waterways Association to restore traffic on the rivers. It is my understanding that the Government purposes to use about \$3,000,000 for building power boats and barges to operate upon the upper Mississippi.

Mr. KENNEDY. I saw that in the newspapers, and then I saw it contradicted, that the Shipping Board was not going to set aside the \$3,000,000 for that purpose.

Mr. BLAND. I think you will find that is contemplated.

The CHAIRMAN. It is my understanding that it is still intended to carry out that plan.

Mr. KENNEDY. Would it interrupt you for me to ask you a question?

Mr. BLAND. No, sir.

Mr. KENNEDY. Have you increased the size of your fleet of barges or boats to any extent?

Mr. BLAND. We now have nine steel-hull barges and two power boats.

Mr. KENNEDY. Of what capacity?

Mr. BLAND. We have some lighters for the local trade and to help over the shallow crossings, some of 200 tons, some barges of 600 tons, some of 900 tons, and we have had barges with a tonnage of as much as 1,400 tons, but we can not use those larger barges on shallow water. We have not increased our fleet recently, and, if you will permit me, I would prefer to reach that in the order in which I want to present this subject. I want to preface my statement with this remark: That there are four elements which will necessarily constitute the successful operation of boats on the river. In the first place, we must have an established and dependable channel of sufficient depth; that first of all is absolutely necessary; in the next place we must have a system of boats and barges which can be provided by us; in the next place we must have coordinated river and rail terminals, of which we are assured, and in the next place we must have through rates or joint traffic arrangements between the boat lines and the railroads, so that the river traffic and the rail traffic may articulate at the terminal points.

We appeared before this committee in 1910, and Mr. Cassidy, then a member of the committee from Ohio, was not friendly to the river. He said, "If we appropriate this \$1,000,000 which you are urging, what assurance may we have that the river will be used?" We then stated to the committee that if that appropriation were recommended we would return and raise a minimum capital of \$1,000,000 with which to build terminals, boats, and barges. That was on the 5th of February, 1910, and in March we inaugurated that campaign, commencing on the 1st day of March, and at the close of March, the 31st day, we had secured, by public subscription, \$1,202,000. At that time we were in the dark as to the type of boat to be used and

the barges. We had to pioneer in the work, and we have developed a type of boat with which we are thoroughly satisfied, except that we know its horsepower must be increased when we secure greater depth of channel. Our power boats have 600 horsepower, and we know we need 1,000 horsepower.

We know that barges carrying 2,000 tons would be cheaper operation, upon a completed channel, one of sufficient depth, than a 1,000-ton barge, and when this channel shall have been completed by the Government it is our purpose to increase our horsepower and to increase our barge tonnage, in the single units, I mean. We have operated during low stages of water with the present fleet at a loss because we have been compelled to operate with this class of boats resulting from an insufficient channel. We have done that, however, to evidence our good faith in the undertaking. Our patronage has largely exceeded our capacity. We have been offered freight that we could not possibly handle, and that, too, even down the river on export freight, consisting of flour and feed.

THE CHAIRMAN. Why? Was that on account of the lack of carrying capacity?

MR. BLAND. Yes; on account of the lack of carrying capacity. We secured a joint rate with the railroads. We went before the Interstate Commerce Commission and secured a joint rate in a proceeding against the C. & O. Railroad, by which we were enabled to handle export flour from Kansas City to East St. Louis, transferring there to the railroad, delivering it to Newport News and Norfolk. The railroads had established a differential rate on through carload service on flour and feed for export 2 cents less than the sum of the locals, that being the differential. We realized that we ought to secure the down-river trade on export flour, and the commission ordered the railroads to grant a joint rate. That was in 1915, and thus we secured a 2-cent differential on the through rate which, with the differential of 20 per cent, which we have established on the river as against the rail rate, gave us an attractive rate. Now, that gives us an advantageous rate and secured for us all the tonnage that could export until last year and this year, when we encountered an embargo placed at times against export shipments.

We have been handicapped very considerably by that, and it is one of the reasons for the decrease in tonnage down river. Mr. Kennedy, and on account of this embargo our down-river trade has not been as great as it was and would otherwise be. We would have notified that the embargo would be lifted and we would secure the shipment of a great many carloads of flour, put the flour on the barges, and carry it to East St. Louis when the embargo would be replaced, which would necessitate our storing it in our warehouses and holding it sometimes anywhere from 30 to 40 days. Of course, exporters would not give consignments to us under those circumstances. I am not stating that in criticism of the railroad; it is simply a condition which neither they nor we could control and from which we suffer, but it is a fact. The railroads have cooperated with us and treated us very cleverly when possible since we secured that joint rate.

We have established terminals at Kansas City and we can handle a large tonnage at low cost there. As a matter of fact, we have

handled flour, for example, at 12 cents a ton, loading it from cars over our dock and into our barges.

The CHAIRMAN. Twelve cents per ton for the cost of transferring it?

Mr. BLAND. Yes, from cars over the dock to the barges. We use electric power in moving our hoist or crane on tracks extending over our dock at Kansas City, and have a conveyer system at our dock at East St. Louis. The cost at St. Louis, moving the flour, was 16 cents making a total for the two handlings of 28 cents a ton. As you gentlemen are aware, roustabout labor costs anywhere from \$1 to \$1.20, depending upon the work of the roustabouts, and the cost has run up to \$1.40. That was one of the items that has formerly contributed to increase the cost of river traffic. We have built our own terminals or warehouses and equipped them with modern appliances, at East St. Louis. At Kansas City the city has provided a warehouse and dock which is to be used by all river lines; it is not private but a public warehouse and dock to be used by all of the river lines.

The CHAIRMAN. It is owned by the city?

Mr. BLAND. Yes. I may add intermediate points on the Missouri River have expressed a willingness and desire—and some of them have taken steps—to establish warehouses, and we have urged upon them the importance of securing terminal facilities to be used by them. From this you will see that the people are in earnest about it. When we had a hearing before the Board of Army Engineers many of them came there and testified, representatives of the different cities along the Missouri, as to the steps they intended to take and some of which had been taken. St. Louis has voted \$275,000 with which to establish terminals in St. Louis proper; our terminal, as stated, is in East St. Louis, Ill. We receive freight and absorb all the delivery charges in carload lots, and we take trap cars of miscellaneous loading, of anything not less than 6,000 pounds, and deliver it to our wharf at St. Louis. We also absorb the transfer charges for L. C. L. freight at St. Louis by the Columbia Transfer Co. and the St. Louis Transfer Co. We deliver in less than carload lots to our dock at Kansas City and shippers come and get the freight, while on all carload lots we reload on the cars and switch without charge therefor to the various industries or plants in Kansas City. So that we are really a carrier competing upon the same basis relative to delivery as the rail lines.

The CHAIRMAN. Would it interrupt you at this point if I asked you a question?

Mr. BLAND. No, sir.

The CHAIRMAN. Will you give us a brief description of your water terminals at Kansas City?

Mr. BLAND. The dock that is already constructed is 550 feet long.

The CHAIRMAN. Is that the total length of the water front that the city owns?

Mr. BLAND. No; Kansas City has much more ground than that. The 550 feet applies to the wharf that is already constructed. The warehouse is fireproof and 300 feet long. It is equipped with the elefer overhead system. We have a Brown hoist or movable crane, and for operating it and for moving cars along and over the wharf

we use electric power. At St. Louis we have a moving conveyer operated by electrical power.

The CHAIRMAN. How is this terminal connected with the railroad line service?

Mr. BLAND. We have trackage right at the warehouses, both East St. Louis and Kansas City.

The CHAIRMAN. Who owns that connecting line?

Mr. BLAND. At Kansas City, the railroad; it is the Missouri Pacific track which is there now, but only by revocable grant on the city's ground, which can be canceled if we are not treated fairly.

The CHAIRMAN. Which connects your water terminal with the railroad?

Mr. BLAND. Yes, sir. We also have a belt line—

The CHAIRMAN (interposing). Is that the only connection between your water terminal and the railroads serving Kansas City?

Mr. BLAND. We have a belt line in Kansas City, which is operated by a company composed of all of the railroads. In that connection I may say that we carry our own insurance on all shipments. When we first commenced to operate on the river it was impossible to obtain insurance at any rate. We are now offered insurance at $32\frac{1}{2}$ cents per \$100 valuation. We feel the rate should be lower than that, and we are carrying our insurance and have never had a loss except on the sinking of one barge at the wharf in St. Louis; that is the only loss we have had. All bills of lading are insured.

The CHAIRMAN. Let me ask you, further, about this belt line. You say it is owned by a separate corporation?

Mr. BLAND. It is owned by all of the railroads in Kansas City, and the railroads centering in Kansas City; merged by a franchise granted by the city into a separate company.

The CHAIRMAN. Under some separate corporate name?

Mr. BLAND. Yes. It is, as stated, operated under a franchise that was granted by Kansas City, and it runs for 200 years. We have provided in that franchise that the terminal company may not acquire or own, by purchase or otherwise, any independent terminal of the constituent railroads running to any individual plant or factory in Kansas City. That ordinance, we think, is legal, because some time ago the railroads threatened to put in switching charges and we then invoked the terms of the franchise, and they discontinued the attempt.

The CHAIRMAN. What control has the city, representing the public, over this belt line?

Mr. BLAND. We have no control, except the right as an interstate carrier, to insist upon the same treatment that is accorded to any line of railroad.

The CHAIRMAN. That is, you have no control as to its use or as to the terms of service?

Mr. BLAND. No; we have none, except as I have stated, and which would entitle us to fair treatment under the rulings of the Interstate Commerce Commission. I have forgotten whether we have a provision in the franchise as to the maximum charge, but my recollection is that we have. We have never had any complaints arise from that, and we feel perfectly safe so far as this terminal service is concerned.

The CHAIRMAN. Is it true that all of the railroad lines serving Kansas City and all of the water carriers have the use of this belt in connecting the water terminal with the railroads?

Mr. BLAND. Oh, yes; all of them.

The CHAIRMAN. And you say there has never been any complaint to the service?

Mr. BLAND. As to the service; no, sir.

The CHAIRMAN. Of course you are not quite prepared to say what control the city has over it or its terms?

Mr. BLAND. Except as I have stated.

Mr. OSBORNE. Is there not probably a provision in the franchise given to the belt line providing that they shall serve all companies upon a fair basis?

Mr. BLAND. Yes, sir; I remember that provision. I wish to say that nearly all of the railroad companies absorb switching charges. For instance, the Santa Fe runs from Chicago, and it may have a terminal running to a private plant where the Burlington will not have a terminal. Both roads run from Chicago, so the Burlington to secure its share of the freight will say, "We will deliver freight the same as the Santa Fe and we will absorb the switching charge, and you will give us the haul." Such proceeding is perfectly legitimate and legal, and the Burlington and other roads do that. The same is true of all the roads entering there that have no terminal to any particular plant. They will absorb the switching charge. The same could be true of the reverse condition—that is, if the Burlington had a terminal to a plant and the Santa Fe had no terminal the latter could absorb the switching charge. I think there are about 2,000,000 of switching charges absorbed there each year, or were at the time the franchise was given.

Mr. BOOHER. When you say the railroad companies that have no switches to these factories absorb the switching charges you mean to say by that they pay the switching charges?

Mr. BLAND. Yes, sir.

Mr. BOOHER. There is no charge to the company receiving the goods?

Mr. BLAND. No; the Burlington will pay the charge and the Santa Fe will pay the charge, and so on down the line with the different roads running into the city.

Mr. BOOHER. In other words, the business houses do not as a rule pay any switching charges?

Mr. BLAND. None whatever; our boat line has to pay the switching charges, or as we say, we absorb them, and we expect to continue to do so. We can operate our boat line at a profit when we have a large volume of water to enable us to load to the maximum capacity of the barges. We have demonstrated that over and over again; we are thoroughly satisfied as to such result. We feel and know, from past practical demonstrations, when this channel shall have been permanently established by the improvement of the river we can safely expend our money for greater power boats and larger barges and operate at a profit. Mr. Dickey, the president of the company, has made the statement that we could operate at a profit downstream 50 per cent of the rail rate, because we simply gravitate down the river to St. Louis with low use of power.

The CHAIRMAN. How near is the railroad track of the Belt Line to the water carriers? In other words, may freight be transferred from the water carrier to the rail car through one movement?

Mr. BLAND. Yes; it is 50 feet, and we could make the transfer right from one to the other; we have had no trouble in that regard.

The CHAIRMAN. This terminal is within the corporate city limits of Kansas City, is it?

Mr. BLAND. Yes; and, as I have said, we have terminals at East St. Louis, and in St. Louis, Mo., very extensive terminals are now being built. They now own 11 miles of trackage, and in connection with the St. Louis terminals, which will be completed by spring.

Mr. DUPRÉ. You said "they" now own 11 miles of trackage. Who are they?

Mr. BLAND. The city of St. Louis; it has appropriated \$285,000. I think it is, by an issue of bonds. They realize the absolute necessity of this improvement. The congested traffic in our sections is very great. We need to secure relief in some way, and the only way to secure that is by the use of the rivers, sooner or later.

The CHAIRMAN. What kind of highways have you leading to and from the water terminals?

Mr. BLAND. Very good in the cities. We are urging the building of highways to points along the river, so that they may deliver and receive freights along the river at points where we touch when the channel is completed. I think that the local communities are realizing that necessity thoroughly. Of course, the development will be greater after the channel has been completed and there is a dependable service. We can go up the river at proper stages of water 72 hours and down in 48 hours, thus making a five-day round trip under, as I said, favorable conditions. Traffic moves more rapidly than it does by rail, and when we can run day and night—we are handicapped by the lack of shore lights—there will be an increase in the traffic. At present we are compelled to tie up at night, except on certain stretches of the river. By being compelled to do that we are greatly handicapped in operation awaiting the completion of the channel.

Mr. KENNEDY. How many landings have you between Kansas City and St. Louis for regular boats?

Mr. BLAND. Mr. Mackie, the manager of the boat line, goes up and down the river constantly, and he can give you that information accurately; I could give it to you approximately, but he can tell you absolutely about that.

The CHAIRMAN. How much has Kansas City invested in this water terminal?

Mr. BLAND. The terminal as constructed, I think, has cost \$75,000 up to this time, and it is sufficient for our present capacity.

The CHAIRMAN. Can you approximate the tonnage which has been carried under a traffic arrangement with the railroads—that is to say, partly by rail and partly by water?

Mr. BLAND. I think Mr. Mackie can do that approximately; he is thoroughly acquainted with that and all of those details pass through his hands.

If there are no other questions, I think it is unnecessary to take up more of the time of the committee, except to conclude by stating that we have safeguarded the Kansas City Missouri Navigation Company.

a way which will forever prevent its control passing into hostile hands.

In addition to the \$1,200,000 of preferred stock which was subscribed by over 4,000 subscribers, there was issued \$2,000 of common stock. The preferred stock is nonvoting stock, but the common stock only possesses voting power, and it has been issued to and placed in the hands of 13 trustees, who are prominent men engaged in different lines of commerce and manufacturing business in Kansas City. These trustees have power to fill all vacancies. No trustee has power to sell or transfer his stock. If he attempts to do so, his stock may be recalled by the others, a vacancy declared, and filled. The common stock is deposited for safekeeping and to prevent transfer.

The trustees constitute a self-perpetuating body of control, and there can be no time in the future when any hostile interests can obtain the control or management of the boat line company.

Mr. BORLAND. Will the committee now hear Mr. Mackie?

The CHAIRMAN. Yes.

STATEMENT OF MR. A. W. MACKIE.

The CHAIRMAN. What is your official position?

Mr. MACKIE. General manager of the Kansas City (Mo.) River Navigation Co. On the matter of traffic moving by river, about which Mr. Kennedy, I believe, asked, we have been operating now for seven years. We began, in an experimental way, with one steel-hull packet boat, which was available at the time, and began at the same time our investigations, by employing a marine engineer and sending him all over the country in an effort to learn something about the best type of equipment for shallow-draft transportation. After these investigations, running over a period of about six months, we concluded to build some towboats and barges.

The CHAIRMAN. What was your general conclusion on that subject and what did you do? What kind did you build?

Mr. MACKIE. Our general conclusion was that towboats and barges were best for transportation on this river, and that conclusion was reached for more than one reason, the principal reason being that barges could be left at terminals to be loaded and unloaded without interfering with the movement of the power unit, which is the expensive operating unit. The power unit or towboat may move back and forth with loaded barges while other barges are being loaded or unloaded at the terminals. We concluded to build steel equipment for the reason that the Missouri is an unimproved river and at present has a great many obstructions in it—snags, rocks, and one thing and another. Barges are apt to ground a great deal and to undergo a great deal of stress and strain from that condition. We did not think wood would stand it; in fact, we knew it would not, because there are so many wrecks of wooden boats in the river now. So we concluded to build entirely of steel. We had power boats designed especially for the Missouri River, having in mind the fact that we would have to operate for several years in shallow water.

The CHAIRMAN. Tell us their length and beam and their draft when loaded.

Mr. MACKIE. The determination of the size of units was a matter of experimentation. We were unable to learn from anyone else just what we could use; that is, from those people who had operated on the Missouri and rivers of that sort. There was a great diversity of opinion as to what type of barge, what size barge, and all that, could be used. We tried to construct a barge that would be between the extremes of the men who believed in the small boat and the men who believed in the large boat. Our first barges were 200 feet long, 36 feet wide, and with 8 feet depth of hold, having a cargo house on the deck of the barge 12 feet high and as long as we could possibly make it, so as to leave a working space at either end, at the bow and stern of the barge.

The CHAIRMAN. Give us the draft, light and loaded.

Mr. MACKIE. Those barges were built of quarter-inch steel, rather heavily built because of our inexperience and the inexperience of marine engineers as to the type of boat required for inland waters. Very few marine engineers knew much about inland transportation; their experience had been with transportation on the ocean, on the Great Lakes, and bays and sounds. Two of our barges were built for carrying 900 tons. They draw 18 inches light and carry 200 tons per foot of load. After operating one towboat, one steel-hull towboat, with those two barges, we concluded that, pending the completion of the improvement, it would be more profitable for us to use a smaller barge than the 900-ton unit, so we placed an order for three steel-hull barges of 600 tons capacity. Those barges are 156 feet long, 30 feet wide, with 8 feet depth of hold, with steel cargo houses on deck, 12 feet high, with hatches in the roof of the barge from one end to the other. For instance, a hatch can be opened at any part of the barge and the freight taken out with a crane. In order to handle the class of freight which we had learned we could get, and in which there was the most profit—the higher classes of freight, and which we found from experience was very bulky—we concluded that we needed more cubical contents in our cargo houses in order to carry somewhere near the capacity of the barges. So the newer type of barges—the second barges that were built—instead of having a deck at the 8-foot level on the top of the hull of the barge, as most decks are built, have recessed decks, giving an additional 5 feet of height on the inside of the cargo houses. That is, we have a double hull, virtually one hull within another. The newer barges were built with cross bulkheads, so that a puncture of the hull by striking a snag or other obstruction would not cause the barge to sink. It is our opinion now, after operating for several years, that our 600-ton type of barge is the most economical type of barge and the most satisfactory to use under present conditions. Eventually, when the channel is made permanent, I am sure we will go to a large unit of barge. We have now in service nine barges and two steel-hull towboats. Barges are at the terminals loading and discharging while the towboats are working up and down the river with other barges.

The CHAIRMAN. Describe your towboats, and which you think is the better type.

Mr. MACKIE. We were obliged, as I remarked a while ago, to do a lot of research work and some experimenting. We have spent a considerable amount of money in making tests of the different kinds of

equipment we found in the country. The Engineer Department was very kind in permitting us to make a number of tests with their boats, I mean such as tests of pushing power in order to determine what one horsepower would do if applied to stern-wheel and twin-screw boats. We finally succeeded in securing a twin-screw towboat, with a steel hull, drawing 3 feet of water and developing 600 horsepower, which was 200 more horsepower than we had elsewhere found on this limited draft on the inland waters of the United States. We bought that towboat in 1911, and we have been operating it practically ever since and have found it highly satisfactory. The United States Engineer Department has built a towboat on the same lines since our experience with that boat. We bought a small stern-wheel boat at the same time, which we were able to buy cheaply, because some years back boats were very cheap, no one using them extensively.

As we gained in experience we found a necessity for greater horsepower, and we employed a marine engineer and naval architect and have had him employed now for four years; during that time, as we found a necessity for changing any of our equipment, we had him work right on the river, up and down on the boats; in that way he found out what was necessary to be done and planned and designed the changes. The boat I have just referred to was a stern-wheel boat, and it originally had 180 horsepower. We equipped it with new engines, tandem compound, condensing machinery—all as modern as we could find, and as economical, for inland-water boats. That boat now has a capacity of 600 horsepower which, under pressure, can be boosted to about 700 horsepower. So our two boats, one being a twin-screw boat of 600 horsepower, and the other a stern-wheel boat of 600 working horsepower, can, in either case, be boosted 100 horsepower.

We find that the Missouri River has an exceedingly swift current, which, I presume, is not news to you. The fall in the Missouri River between Kansas City and the mouth of the river is very much greater, and the current is therefore greater, than the upper Mississippi, the Ohio, or lower Mississippi, and the question of what horsepower will do in that river becomes important. We have found that in the Missouri River 1 horsepower will push upstream, if well applied, 1 ton of freight at a speed of not less than 4 miles an hour. It would not be possible to get freight for delivery in our barges if we could not make reasonably quick deliveries to Kansas City. If we pushed our freight at less than 4 miles an hour the speed would be so slow that I fear our best friends would not stay with us, except under stress of war and shortage of cars. We used as much horsepower as we thought we could put in the boats. We have had the Government provide shore lights, and over certain stretches of the river we are able to operate upstream night and day all through the season; during the high-water stages we are able to operate all the way through from St. Louis night and day; downstream we operate only during daylight.

All of that has built up our service and brought us customers that we would not otherwise have. We have barges in which we are able to handle safely and deliver in good condition the most fragile class of freight. I refer now to such freight as cut glass in barrels and hogsheads and pianos with fine strings of wire, which are subject

to rust from moisture. We had to demonstrate that we could handle pianos and that the wires would not rust. We have to make all sorts of demonstrations on the Missouri River, and had difficulty to meet which other transportation lines do not face. We had to guarantee that we could handle pianos and deliver them safely before we could get them on our barges. That is very different from a railroad, which merely has to name a rate to get them. We had to make quite a strong guaranty in order to get our first shipment, but now we handle anywhere from 10 to 100 on each trip upstream.

The CHAIRMAN. How do you handle your barges—how many a tow?

Mr. MACKIE. Well, I did not finish on my horsepower statement, but this brings out the point you want, I think. We were told by the towboat men who were experienced on the Ohio and other streams about towing downstream a great number of barges of coal—as high as 60—but that happened to be a rafting proposition, just the same as rafting logs down a stream, except that in that case they had a power boat at the back end of the raft with which to steer the raft while floating down the river. We were misled a little by some of those statements. We thought it would be possible to keep hanging barges to our towboats without limit, but we soon discovered the relationship between horsepower and tonnage to be carried on the Missouri. We have found that our maximum load is three 600-ton barges upstream with one of our small towboats. You can readily see, then, that by increasing the horsepower of the towboat you automatically increase the speed of your load. We have determined after a lot of work and keeping a lot of data, that we can build towboats of 1,200 horsepower, of 3 feet draft, which would virtually double our freight capacity, and the only increase in operating expense would be the additional fuel used by the towboats.

Mr. KENNEDY. You said you towed three 600-ton barges upstream. Does that mean loaded to the maximum capacity?

Mr. MACKIE. No, sir; there is only a short time during the year in which we can load any barge to its maximum capacity.

Mr. KENNEDY. I understood you to say that one horsepower will push 1 ton of freight upstream, and I was wondering how, with a 600 horsepower boat, you could take 800 tons upstream?

Mr. MACKIE. I thought the question was as to our maximum load. Our maximum load would be three barges loaded with 300 tons of freight, or 900 tons. However, that is not our regular trip; that is simply our maximum. Ordinarily we operate with one barge on one towboat and one barge on a trip. If the depth of water is so shallow that we can not get very much tonnage in one barge, then we load two barges with less tonnage each.

Mr. KENNEDY. Does your current increase with an increased depth of water?

Mr. MACKIE. In the high-water stage the current is much more severe than at low water, and as the current increases in speed the depth of water increases and we are able to load more freight on one barge and have less resistance on the towboat.

Now, I think you may be interested in terminals. Judge Blanton mentioned them. The East St. Louis terminal, which connects with all rail lines entering East St. Louis and St. Louis, is a private

terminal. We have tried to induce the city of St. Louis to build a public terminal, such as Kansas City has built, and they have now entered on the work of the erection of a public terminal, which will be finished, I think, in the spring. It would be quite an advantage for us to have a public terminal at St. Louis; other boats can land there, exchange freight with us, and we can exchange freight with other boats at that terminal, instead of having to go across the river, as is the case now, or their coming across to our terminals.

Mr. KENNEDY. I asked Mr. Borland or Judge Bland how many regular landings there are between Kansas City and St. Louis. Are there any landings in that stretch of the river?

Mr. MACKIE. Answering the first part of your question, we have no regular landings between Kansas City and St. Louis. We run right through, if possible, but we are forced to make some landings to take up freight at some other places.

Mr. KENNEDY. You have not many cities or many manufacturing plants along that stretch of the river, have you?

Mr. MACKIE. Yes; there are some very nice opportunities in the future on the Missouri River. There are a number of shoe factories along the river, and, I think, the biggest corncob-pipe factory in the world is on the Missouri River—the so-called Missouri meerschaum pipe. They ship a great many of those pipes out of there, and we are forced, once in a while, to take loads of corncobs to that factory; there are a number of coal mines on the river; a few brick plants; and one of the largest silica-sand plants is on the Missouri River. There is a lot of freight there to be had when there is a channel of sufficient depth and permanent location to justify the investment in a lot of equipment to move it. To be frank with you, the unimproved Missouri, with its swift current and uncertain location of channel is not an attractive proposition for the transporting of coal, silica sand, and other low-grade commodities, but it will be when we have a permanent 6-foot channel.

We can then go after a lot of the freight that is available on the Missouri River. We had the fortunate advantage, when we began our line, of having a balanced tonnage both up and down stream. We are in an important food-producing community, where a lot of our business is manufactured and other products from grains that move west. It is all of a kind that we can handle under normal conditions, and westbound we take manufactured products going into that territory.

Judge Bland has told you about the embargo, but I would like to tell that to you a little more clearly, if I can. When we get freight from Kansas City or from other places beyond Kansas City, that freight must be loaded into cars; it must be transferred to a barge, transported by water to St. Louis, and put on cars. Now, we may have a barge load of freight and by the time we get it to St. Louis the rail lines which are to carry the freight to Newport News or any other place may have placed an embargo against that kind of freight, so we cannot allow the freight to remain in the barges, so we must move it in our warehouse, and then when the embargo is lifted we move that freight into cars and get it started, if we are fortunate. Now, that freight may have remained in our warehouse 30 days or more, and the western rail lines competing with us, when the embargo is

lifted, are able to get their freight very much more rapidly to eastern lines, and perhaps before they embargo again, so that every embargo operates against a water line as a handicap.

The chairman asked a question, I think, a little while ago about the volume of freight that we have developed in conjunction with rail lines. Roughly, 80 to 90 per cent of our westbound freight comes to us from rail lines east of the Mississippi River.

The CHAIRMAN. Do you move that under a general traffic arrangement on a through bill of lading?

Mr. MACKIE. Not that particular freight, and for this reason: the making of freight rates in the United States, the Mississippi River is used on all east and west rates as a basing point: practically all rates break on the Mississippi; a rate from the east to Kansas City is so much to the Mississippi and so much from the Mississippi to the western point. As these rates break on the Mississippi, we are not obliged to file tariffs in order to get the same proportion to that would apply to the western rail lines. If it were necessary, in order to get that same rate to apply on freight to move by river to move by rail, west, we would file tariffs. We have already been through that and established our right to file tariffs establishing joint rail and river rates.

On eastbound business, it so happened that this condition existed when we went in the business. There was a through rate from Kansas City to Newport News and Norfolk on flour for export, which rate did not break on the Mississippi River. In order to participate in that rate, we were obliged to file our tariffs, and did, as Mr. Bland told you, and those tariffs are in existence each year. I do not think there will be any objection now by anybody, since the matter has been adjudicated once, to our putting in any freight rate which might find it necessary to put in.

The CHAIRMAN. You think that trouble has all been adjusted?

Mr. MACKIE. I think so. There may be some isolated case, Mr. Chairman.

The CHAIRMAN. I mean the general freights.

Mr. MACKIE. Such rates have been established by the Interstate Commerce Commission in a dozen instances, and in one instance which we are interested—in the rates to Newport News and to Norfolk.

The CHAIRMAN. The railroads have shown a disposition to cooperate, serve it?

Mr. MACKIE. Yes; and the commission was not obliged to force them to do that but, after having rendered the decision, it gave the railroads 30 days in which to join us in through rates and the railroads gave us their permission within 15 or 20 days to file the tariffs.

Judge Bland mentioned the dredges. I want to say a little more about that. On account of the delay in improving the Missouri River—the time it has taken to improve the river—we have urged the Engineer Department to give us some temporary relief during the periods of low water in the spring and fall. We have urged the use of dredges on such crossings as might develop shallow channels. Dredges had never been used in the Missouri River in all its history for channel improvement purposes, and they never can be used for permanent improvement, due to the silt-carrying proclivities of the Missouri River and, because they had never been used, we had d

ulty in convincing the engineers that they should be used. This year, under the express purpose of aiding commerce, they agreed to make a trial. Two dredges were brought into the river and on August 26th of this year one crossing near Washington, Mo., developed a channel of only $2\frac{1}{2}$ feet, making it impossible for us to have gotten over that stretch of the river—that crossing. One dredge that was in the river at the time was speeded to that point and cut a channel through there, and we were not delayed. After the second dredge came in, one was assigned to the upper half of the stretch and the other to the lower half, and those dredges more or less effectively kept the channel open to a depth of over 4 feet, each dredge being assigned to 200 miles of the river—an excessive stretch of river for a dredge—but they were pretty good dredges, and they did quite well. With the addition of the third dredge, which we are relying upon the engineers now, we hope to be able to overcome some of the difficulties due to low water during the spring and fall. If we can keep the crossings open, naturally, we can carry more freight.

Mr. OSBORNE. Are those dredges hydraulic dredges?

Mr. MACKIE. They are centrifugal sand-pumping dredges. They call them centrifugal suction dredges, and they are excellent dredges.

Mr. KENNEDY. Are they not carrying along permanent improvement at certain points, after they start from Kansas City, going east?

Mr. MACKIE. It has been found that to start at one point and finish the improvements would require a great many more years than perhaps this generation will see, and it was concluded that the best way to hasten it would be to find a number of points at which starts could be made, and work downstream.

Mr. KENNEDY. I know they are just revetting certain points, but did not know they had started at Kansas City and come on down.

Mr. MACKIE. There are four reaches in the river. The Kansas City reach extends from Kansas City down to Waverly; the next reach begins at Waverly and ends at Glasgow; the next reach extends from Glasgow down to Gasconade; and the next reach from there out to the mouth of the river. From each point they are working on downstream, with the idea of doing continuous, permanent work.

Mr. BLAND. Mr. Mackie, may I suggest that you explain to the committee the conditions resulting from the Panama Canal, in that territory?

Mr. MACKIE. Kansas City and some other western cities had an advantage on west coast trade, as compared to cities east of the Mississippi River, prior to the opening of the Panama Canal. For instance, one soap concern in Kansas City had a big business in the west and for western exports to the Orient, but after the Canal opened and the intercoastal rates were put into effect the soap manufacturer in western territory was up against a situation from which they seemed to be no relief. They wanted to ship by river to New Orleans from Kansas City and there put their goods on board ship to go through the Panama Canal, to take advantage of those low rates and hold their trade on the west coast. There was no boat operating on the Mississippi, so we could not name them a low rate to the seaboard, and, as a result, the manufacturer was compelled to build a branch factory on the west coast or go out of that

trade. He chose the former alternative, and has a factory out there now. In other words, the capital and pay roll that he had in Kansas City is out on the west coast now, due to the Panama Canal favoring the rates between coastal cities.

The Panama Canal rates which were in effect before the war were declared boosted the Central West territory to a high pinnacle of freight rates as compared to the rates between cities on the two coasts. That alone should urge the use of western rivers to reach seaboard at the lowest possible rates.

Mr. KENNEDY. That same, then, applies to all?

Mr. MACKIE. The Central West.

Mr. KENNEDY. That applies to the Mississippi River points, of course?

Mr. MACKIE. Yes. The question was asked as to increased equipment. I think you will find very few business men who would be disposed to invest a lot of money in equipment for carrying freight on the Mississippi River, or any river, a number of years in advance of the rivers being made ready to carry freight profitably. We are not carrying freight profitably, except in the high-water seasons. The rate situation throughout the country—the freight-rate situation—has been undergoing a change and the change has been upward, and I presume there is going to be some more of that. Vastly out in our territory are in the only major freight-making territory in the United States that has not had a horizontal advance in the last seven years.

The other territories have seen advances ranging from 3 to 10 per cent. We have endeavored to hold rates stable while others advanced, and we have done so. But that, in dollars and cents, might be interesting. Assuming, as we estimate, there are 10,000,000 tons of freight moving annually through Kansas City; assuming that the average revenue per ton of freight on that 10,000,000 tons is, say, \$5 a ton—that would be less than the third-class rate between Kansas City and St. Louis. Our freight revenue, then, would be \$50,000,000. Take one-half—less than one-half—of the advance rates throughout the other major freight territories, say, 6 per cent, so we have held rates down 6 per cent or prevented an advance of 6 per cent on \$50,000,000 per annum, which is quite an item to the Southwest, and that has gone on for quite a number of years—the saving of \$3,000,000 per annum.

Mr. KENNEDY. Do you figure that 15,000 tons of freight would serve to bring about that result?

Mr. MACKIE. If you had the general freight agent of some western railroad, the freight-traffic manager, or, say, the vice president in charge of traffic here standing before you instead of me and asking him that question, he would say this small amount of tonnage on the Missouri River has influenced that situation. As proof of that the Interstate Commerce records contain—not once, but several times—the testimony of the western rail lines in rate-advance cases in which the freight-traffic managers of the railways themselves have testified that the rates, as made to Kansas City and Missouri River crossings, were made on what they chose to term a water-compelling rate basis. We are in fact, gentlemen, operating on a highway that is not ready for use, and we will continue operating, and trust you will continue providing funds to make it ready, so that eventually

can get back some of this money that we have lost in operating. We feel we do not operate alone for Kansas City, because whatever we do on the Missouri to influence the making of rates we can carry eventually a great amount of freight by water without any regard to what the railroad rate may be, and we will benefit the whole Southwest, because the whole Southwest gets freight through the Kansas City gateway and sends it east through the Kansas City gateway. The CHAIRMAN. What kind of terminals has St. Louis; water terminals?

Mr. MACKIE. Until now she has had a paved levee, paved with cobblestones, a levee of which they felt justifiedly proud for a number of years. Now they are ashamed of it. They called it a terminal. It was not. It was impossible to handle any freight in exchange with rail lines, because there were no rail lines down near the boats, and it was necessary to haul everything by wagon. This is not an age of wagon hauling of freight when any other bigger and better scheme was possible.

The boat lines operating out of St. Louis, the packet line, have their own terminals, in the way of floating wharfs—wharf boats they call them. A wagon can drive on to one of those wharf boats, load its freight, and drive off.

The Chairman. Something like those makeshifts they have on the Missouri River?

Mr. MACKIE. Yes, sir; and it is impossible to handle any considerable amount of tonnage with the wharf boats where the freight has to be hauled by wagon. Now, after we have been operating for some ten years, we have finally convinced the people, the business men, the chamber of commerce, the mayor, and others interested in public works, that St. Louis is very beautifully situated in respect to her river front and should have a modern terminal, and they are actually building it, and I must say that the design of that terminal is the most modern that we have seen anywhere, the St. Louis terminal. It is built in units or sections, with 1,100 feet frontage, so that other lines, for instance, may arrange to operate on a frontage of 200 feet, another line will have 200 feet, and then another line 200 feet, and then they are providing modern freight elevators and conveyors of various kinds.

If there are no questions, I think that is all I have to say.

Mr. DUPRÉ. Would you care to disclose approximately what investment your company represents in the seven years it has been in operation?

Mr. MACKIE. No, sir; we have, roughly speaking, \$520,000 invested in equipment.

The CHAIRMAN. Has any member of the committee any further questions that he wishes to ask?

Mr. BORLAND. I just want to call on Mr. Clendenning, the secretary of the Commercial Club of Kansas City, to say two or three words about the freight situation.

STATEMENT OF MR. E. M. CLENDENNING, EXECUTIVE OFFICER OF THE CHAMBER OF COMMERCE, KANSAS CITY, MO.

Mr. CLENDENNING. Mr. Chairman, I do not want to impose upon you and the other members of this committee. I am an executive officer of the chamber of commerce, which is a business men's organi-

zation, and we have been deeply interested in the improvement of the Missouri River now for a great many years. I think you all know, as well as I could tell you, perhaps, that the congestion on the railroads is very great, and we consider that the improvement of the Missouri River is going to relieve that congestion to a great extent. These other gentlemen have explained the matter very fully.

The CHAIRMAN. Is there anything further?

Mr. BORLAND. I have nothing further, Mr. Chairman. We are very much obliged for this courteous hearing, and I want to make a request of the chairman that when the stenographer's notes are turned in Judge Bland and Mr. Mackie may have an opportunity to revise their remarks. The stenographer has promised, as I understand, that they will be turned in to-morrow morning, so that these gentlemen may have an opportunity to look them over.

(Whereupon the committee adjourned.)





MOBILE HARBOR, ALA.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF MOBILE HARBOR, ALA.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

FEBRUARY 1, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

IMPROVEMENT OF MOBILE HARBOR, ALA.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Friday, February 1, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. Gentlemen, the committee will kindly come to order. This is the morning that we have assigned to a delegation from Mobile, Ala., and we are ready now, Mr. Gray, and I will ask you to kindly take charge and indicate the gentlemen who desire to be heard.

Mr. GRAY. Mr. Chairman and gentlemen of the committee, as stated by our chairman, we have before us to-day certain gentlemen from Mobile, representing the commercial bodies of that port, who are to talk to us about the necessity of an increased appropriation for this great harbor upon the Gulf. They have come here under considerable disadvantages; you know something about the weather conditions. In fact, they have come through ice and snow to get here and were about 12 hours belated. They are extremely anxious about this matter, and desire to speak candidly of the real conditions as they are, and of the wonderful developments that have taken place at Mobile since the last engineer's report. These gentlemen are here especially to inform you, and to show you the reasons why Mobile, at this time, should have a greater appropriation than that contemplated and recommended by the Board of Engineers.

I have pleasure in presenting to you the gentlemen who will act as chairman of the Mobile delegation at this meeting to-day. Mr. Stewart Brooks, of Mobile, vice chairman of the joint rivers and harbor committee, who will address you and will present the other members of the delegation who desire to be heard.

The CHAIRMAN. We will be glad to hear from you, Mr. Brooks.

STATEMENT OF MR. STEWART BROOKS, VICE CHAIRMAN JOINT RIVERS AND HARBOR COMMITTEE, MOBILE, ALA.

Mr. BROOKS. Mr. Chairman and gentlemen, we keenly appreciate the opportunity that presents itself to us to-day. We do not wish to take any more of the time of your committee than we have to, and therefore we will not indulge in generalities. The reason I am before you personally is to save time by giving an outline of how we will present our case. We expect, unless you ask questions that will require something else, to ask you to listen to only three technical speakers. We have a delegation of six gentlemen here. One of our

members is, by invitation, with the Fuel Administration to-day and can not be with us, and we are sorry because he is one of the most experienced men we have. We have talkers who will give you nothing but a plain, uncolored, and unbiased presentation from our viewpoint.

I think it will be within the bounds of propriety for me to thank you for giving us the privilege of entertaining two delegations from this committee, one consisting of your honored chairman and Mr. Switzer, Mr. Emerson, and your assistant secretary, as I recall, and the other consisting of Messrs. Frear and Hulbert. We are sorry to miss Mr. Hulbert, but we are glad to meet his successor, Mr. Lea.

The CHAIRMAN. Mr. Lea succeeds Mr. Kettner; Mr. Hulbert's successor has not been appointed.

Mr. BROOKS. Gentlemen, we shall ask you to hear our case in three sections: First, Mr. Horace Turner, who is an experienced shipping man and will present the case generally. He will handle nearly all of the matters we desire to handle before you to-day. We will then ask you to hear Dr. A. G. Ward, president of the Alabama State Harbor Commission. Then we will hear from Mr. Parsons on the industrial development of Mobile.

I may say that we feel we would be done an injustice if our case were considered on anything written or printed. Developments have been so stupendous and so fast that an accurate idea of the condition could not be obtained from anything printed or written. Only a few months ago the Government was taking away from Mobile its normal traffic for export, but now the Government has reversed what it formerly did, and more traffic is being thrust upon us than we ever had before. We believe you will find, when you hear from the gentlemen, that our request for increased appropriations for this port is justified.

I now take pleasure in presenting to you Mr. Horace Turner, chairman of our committee.

The CHAIRMAN. Before the hearing concludes, I think it would be proper if you would have one of the gentlemen describe the water terminals as they exist to-day, and your plans for any future development of such terminals.

Mr. BROOKS. I will ask Mr. Turner to present that matter in the opening portion of his talk. I could tell you in a general way, but I think Mr. Turner could present it more concisely, and I will ask Mr. Turner to give that subject his first attention.

STATEMENT OF MR. HORACE TURNER, CHAIRMAN OF THE JOINT RIVERS AND HARBOR COMMITTEE OF MOBILE.

Mr. TURNER. Mr. Chairman and gentlemen, our petition here to-day for an increased appropriation is really predicated upon the assumption that we can not ever get 30 feet of water at the rate we are going now. We are already far behind; we should have had 30 feet long ago, but on account of first one thing then another we have been allowed to lag behind our competitors. It was in 1904 that we had a favorable report on Mobile as we thought. We came up before this committee and asked for money, and we were asked to get a further test as to the cost of maintenance. That delayed until 1916. We then obtained a favorable report. At that time

was recommended that we should have this 30-foot channel and that it should be completed within a period of four years. We lost much time waiting to get the report, and after the report was approved we lost another two years; so instead of getting a 30-foot channel by 1920, as we expected, we are still not even on the road to getting one, for the appropriations we are getting now will not dig the channel.

I think the appropriation of \$100,000 for new work is based upon the idea that we can use one or more of the existing dredges in our district. There are three down there, one at Mobile, one at Pascagoula, and one at Gulfport, and the idea seems to be that those dredges can be used on our work. As a matter of fact, we have been taking up the question with our district engineer of getting our channel dug to where it originally was, viz. 27 feet. The dredges have been called into service for this emergency work, to go around and dig some of the basins in front of shipbuilding plants, etc. They have been called in because there were no private contractors to do that work, so the Government has been doing it, and it has been very necessary, but it took the dredges from the maintenance work, and almost every channel in the Gulf has shoaled up on that account. It is for this reason that at Mobile we can not do anything but keep up the maintenance work. The engineer at Mobile has written me a letter showing that he could not use the Gulfport and Pascagoula dredges to help out. I should like to read that letter:

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Mobile, Ala., January 21, 1918.

MR. HORACE TURNER,
Mobile, Ala.

DEAR SIR: In reply to your inquiry of the 18th instant regarding time when you could count on having the 27-foot depth restored in the Mobile channel and regarding time when any progress could be expected on the new 30-foot channel, will state that on account of the fact that all the dredges of this district have been used for several months in connection with emergency dredging for various shipbuilding plants, all of the three main ship channels of this district are badly shoaled up, and it will not be practicable to divert either of the other dredges to Mobile. Additional delay has been caused by the extensive repairs caused by this private dredging, as the material encountered in dredging for the shipyards caused much more wear and strain on the dredging machinery than that found in the regular channel dredging.

On account of the large amount of shoaling which has already taken place and the delay referred to, it is believed that all of the funds now on hand will be required to restore the 27-foot depth in the channel. As to date when material progress can be made on the 30-foot project this will, of course, depend on the new appropriation, but, as you are probably aware, it will be impossible to make any material progress on the new project with the dredging plant now on hand. The three dredges which we have are from four to nine years old, and the amount of time required to keep them in first-class shape from now on will probably be greater than it has been in the past. As there is a large amount of dredging work in sight at both Gulfport and Pascagoula, it is not believed that dredges can be diverted from either of those channels for any long periods without serious protests from those localities.

Yours, very truly,

G. K. LITTLE,
Special Disbursing Agent.

So you see we can not get anywhere with the dredging plan. We have either got to have another dredge down there—and that would require quite a heavy appropriation—or we have got to have enough money to finish this channel by outside contracts.

The first recommendation of the Chief Engineer was for \$850,000. That provided for another dredge, and I think the next recommendation of the local engineer provided for a similar amount, something around \$800,000, so that they could really make some headway on this 30-foot project. There is no use talking about giving it to us 15 years or 20 years from now. It is going to be my effort to show you that, based upon our actual tonnage and actual freight conditions, we should have had it long ago, and we should now be given enough money to get it just as quickly as it is possible to do so.

In the first place, I will file with the committee a statement which shows the position of Mobile. This statement is for the year ending June 30, 1913, which is the last normal year for which we have statistics, and which is the last year in which statistics were compiled by the Government in such a manner that you can compare the ports. The statistics are now made up by districts and you can not compare the individual ports any longer.

Statement showing exports and imports for year 1913.

	Exports.	Imports.	Total.
New York.....	\$917,935,988	\$1,048,320,629	\$1,966,256,617
Galveston.....	281,457,858	7,820,938	289,278,796
New Orleans.....	169,980,277	82,399,100	252,379,377
Boston.....	69,552,657	146,599,451	216,152,108
Philadelphia.....	76,315,344	93,204,678	169,520,022
Baltimore.....	116,474,439	32,865,238	149,339,677
San Francisco.....	66,021,385	62,501,681	128,523,066
Puget Sound.....	62,548,100	51,473,683	114,021,783
Savannah.....	58,235,401	4,461,852	62,697,253
Mobile.....	27,823,998	3,675,180	31,499,178

The second statement gives the net registered tonnage of vessels entered and cleared in foreign trade for the year ending June 30, 1913:

	Vessels.	Tonnage.		Vessels.	Tonnage.
New York.....	8,080	28,834,780	Galveston.....	1,376	3,325,800
Puget Sound.....	8,750	5,945,826	San Francisco.....	863	2,278,800
New Orleans.....	2,564	5,312,016	Norfolk.....	628	1,492,800
Philadelphia.....	2,173	5,158,600	Sabine.....	678	1,422,800
Boston.....	2,623	4,969,419	Mobile.....	1,386	1,328,800
Baltimore.....	1,488	3,493,832			

The third statement shows the class of steamers loaded at New Orleans during 1913, showing draft loaded outward:

Steamer.	Draft.	Steamer.	Draft.
Joan D'Arc.....	28	Saxonia.....	27.9
Prometheus.....	27.9	Californian.....	28
Custodian.....	28	Excelsior.....	30.6
Victorian.....	30.6	Phœbus.....	30.6
Indian.....	30.6	Nessian.....	29
Monarch.....	29	Maartensdijk.....	29
Cestrian.....	27.9	Rathlin Head.....	27.8
Commanchee.....	27.8	Armenian.....	28.3
Bulwieser.....	28.3	Meltonian.....	29.9
Wayfarer.....	28.11	Gorredijk.....	28.4
Nubian.....	28	Colonian.....	
Andij.....		Atlantian.....	
Oxonian.....		Kansan.....	
Hesperus.....		Richmond.....	

The next is a statement showing the tonnage handled at Mobile and at Savannah, Charleston, Brunswick, Pensacola, and New Orleans, the principal competitors of Mobile; also, at Port Bolivar, Texas City, Key West, and Galveston, all of them having 30 feet of water. This tonnage statement is shown for 1912, 1913, 1914, 1915, and 1916, and these statistics clearly show that Mobile already has more tonnage than Brunswick and Charleston combined, more than twice the tonnage of Pensacola, and more than that of Port Bolivar, Texas City, Key West, and Brunswick combined, and yet Mobile has to struggle along with a 27-foot channel and handle its tonnage at a disadvantage, although each and every one of these other ports have been given 30 feet of water some time ago. It seems to us that if it is economical for the Federal Government to give these ports 30 feet Mobile should certainly have 30 feet, because her tonnage is equal to that of several of them combined.

Tonnage handled at Mobile and competing ports for 1912, 1913, 1914, 1915, and 1916, and the depth of channels at such ports.

Year.	Mobile.	New Orleans.	Savannah.	Pensacola.	Port Bolivar.
1912.....	2,210,486	5,059,830	3,120,676	1,271,979	428,496
1913.....	2,212,805	6,442,332	3,154,089	1,475,050	256,105
1914.....	2,392,442	6,273,012	2,478,535	1,164,502	267,640
1915.....	1,579,804	6,536,132	2,890,130	871,166	182,450
1916.....	1,673,020	7,300,132	2,748,898	810,514	173,906

Year.	Texas City.	Key West.	Brunswick.	Charleston.	Galveston.
1912.....	464,237	554,107	725,597	986,206	3,224,367
1913.....	446,228	458,780	1,009,026	1,043,050	4,455,088
1914.....	301,106	655,407	487,224	919,184	5,019,794
1915.....	309,789	1,069,077	500,911	920,802	5,336,889
1916.....	265,133	1,028,374	470,016	1,105,901	2,513,081

Depth of water:

New Orleans, 31 feet (upon 35-foot project).

Savannah, 26 feet, plus 6-foot tide.

Pensacola, 30 feet.

Port Bolivar, 30 feet.

Texas City, 30 feet.

Key West, 30 feet.

Brunswick, 30 feet, plus 6.6-foot tide.

Galveston, 30 feet.

Mobile, 27 feet.

Charleston, 30 feet, plus 5.2-foot tide.

Mr. BOOHER. How many feet of water have you now?

Mr. TURNER. Twenty-seven feet, and we can not increase the depth at all at the present rate of the appropriations.

Mr. BOOHER. Let me call your attention to the Engineer's Report, page 834, volume 1, "Conditions at the end of fiscal year." The channel across Mobile Bar is now being used? Is that out in the open Gulf?

Mr. TURNER. Yes.

Mr. BOOHER. Is not that the project you are talking about?

Mr. TURNER. It is part of it.

Mr. BOOHER. The engineer says:

The channel across Mobile Bar, formed by dredging, is 300 feet wide and about three-fourths of a mile long and connects the 30-foot curves of depth each side of the bar. The 30-foot project was completed by dredging during the fiscal year ending June 30, 1914. Expenditures since its completion have been applied to its maintenance. An increase in depth of 7 feet over that originally existing has resulted. On June 30, 1917, the controlling depth in the dredged channel across this bar was 30 feet at mean low water. The total expenditures under the 30-foot project to June 30, 1917, are as follows: For new work, \$100,000; for maintenance, \$168,750.40.

Mr. TURNER. That is for three-quarters of a mile of channel out to the Gulf of Mexico, possibly 7 miles from the entrance of the bay. It is out here [indicating on map]. Here is the channel. There is an enormous basin there, but that is down the bay. Then, the channel runs for 30 miles up to Mobile and $3\frac{1}{4}$ miles above Mobile. The channel is across the bar at the lower end and out in the Gulf.

Mr. BOOHER. Where is the channel that you are speaking about?

Mr. TURNER. I am speaking about dredging the channel to get the boats to the harbor where they can load.

Mr. BOOHER. Is any part of the channel up to Mobile 30 feet deep?

Mr. TURNER. No. That is a 27-foot channel, and since the Government dredges have been used for other purposes the channel has now been allowed to shoal in places to 24 feet.

Mr. BOOHER. I did not understand from this just where it was.

Mr. TURNER. It is outside the outer bar channel.

Mr. SWITZER. How far is that from Mobile?

Mr. TURNER. Thirty-seven miles.

Mr. OSBORNE. What is the tide action?

Mr. TURNER. Our tide is one foot and four-tenths inches; but the tide is peculiar. It is not an absolute tide, as you know it on the Atlantic coast. It is affected by the north wind. If the north wind is blowing it would blow the water out of the bay, and the difference between the high water expectancy when a boat goes to sea and the water left in the harbor after the water has been blown out is about 3 to 4 feet. So, instead of having 1.4 feet that we can count on, we often have 3 to 4 feet below normal. So we do not claim a tide. It is one foot and four-tenths if the Lord is with us.

To show you just exactly the predicament we are in as to this depth of water, I want to read a letter I have from a representative of the British Admiralty at Mobile, who represents the Leyland Line, the Harrison, the Manchester, and other lines. This is the agency that represents the British Admiralty and handles the munitions that come to the port of Mobile for the British nation. He is a very violent kicker about the shoaling in the channel because of the fact that he can not get in and out with his ships. This letter will give you an accurate idea of the situation. He complains regularly, and this happens to be the January complaint:

MOBILE LINES (INC.),
Mobile, Ala., January 29, 1918

Mr. HORACE TURNER, Chairman
Joint Rivers and Harbors Committee, Mobile, Ala.

DEAR SIR: Referring to telephone conversation:

The following extracts from the below-mentioned owners, whose vessels regularly to Mobile, will doubtless be of interest to the Rivers and Harbors Committee of Congress, as showing that 30 feet of water is a pressing need at Mobile.

Extract from letter of Messrs. Thomas and James Harrison (Harrison Line), Liverpool, dated January 7:

"*Clan Sutherland* has been directed into the North Atlantic trade. The ministry of shipping want her to go to Mobile, but she looks rather on the large side, and we will try to get a more suitable vessel sent there instead."

So far, they have not advised us of any vessel they were able to get to substitute for the *Clan Sutherland*.

Extract of letter from Messrs. Frederick Leyland & Co. (Ltd.), (Leyland Line), dated Liverpool, January 4:

"We thank you for the information given us in respect to the maximum draft at Mobile at present, 26 feet. We also learn in this connection from New Orleans that Mr. Guthrie will not agree to a steamer going to Mobile unless she loads to her deep draft, which we shall have to bear in mind when we are able to allocate a steamer to you."

This information that we gave them was an apology for their steamer *Nessian* having to go from Mobile to New Orleans to load 1,026 tons of cargo and bunker coal.

Nessian's loaded draft is 28 feet 10½ inches salt water (29 feet 4½ inches Mobile). *Nessian* is one of 14 similar vessels owned and operated from the Gulf by the Leyland Line, and what applies to her applies to the other 13. As a matter of fact the present draft here leaves out of the Leyland Line's fleet of 44 vessels, only 9 vessels that can load a full cargo at Mobile on the present draft of water. You can readily realize how this hampers them in trying to find vessels they can send to Mobile, and accordingly hampers Mobile.

Yours, truly,

S. A. LE BLANC, *Manager*.

Net tonnage and draft of vessels leaving Mobile.

SEASON JUNE 30, 1913, TO JUNE 30, 1914.

Name.	Net tonnage.	Dead-weight draft.	Draft leaving Mobile.	Where bunkered.
		<i>Ft. in.</i>	<i>Ft. in.</i>	
Montauk Point.....	3,026	26 0	23 0	
Nicosian.....	4,067	28 10	22 1	
Kylemhor.....	1,932	21 0	20 6	
Antillian.....	3,678	26 6	21 2	Mobile.
Ninian.....	4,068	28 10	22 1	
Kyleakin.....	1,976	21 0	20 5	
Nftonian.....	4,066	28 10	23 0	
Warrior.....	2,265	25 0	20 10	Do.
Montauk Point.....	3,026	26 0	22 4	Do.
Meltonian.....	4,066	26 6	22 8	Do.
Berwindmoor.....	2,702	25 6	21 1	
Albanian.....	1,876	21 9	19 5	Do.
Kirnwood.....	1,953	22 0	17 8	
Alexandrian.....	2,899	26 6	23 4	
Kylemhor.....	1,932	21 0	18 6	
Ethyl.....	1,952	22 0	16 0	
Springburn.....	4,120	24 6	19 3	
Ninian.....	4,068	28 10	23 5	Do.
Arlington Court.....	2,833	21 0	19 10	
Tunstall.....	2,438	22 0	11 3	
Nubian.....	4,067	28 10	22 5	Do.
Hechuana.....	2,659	25 6	22 6	
Kyleakin.....	1,976	21 0	19 3	
Kazembe.....	2,935	25 3	22 5	
Seythian.....	3,028	25 0	22 0	Do.
Montauk Point.....	3,026	26 0	22 0	
Fridland.....	2,737	24 6	19 3	
Nessian.....	4,012	28 10	25 3	Do.
Isle of Mull.....	2,772	25 0	17 0	
Kylemhor.....	1,932	21 0	18 5	
Asian.....	3,680	26 6	24 8	Do.
Napierian.....	4,101	28 10	20 6	Do.
City of Naples.....	3,714	26 3	25 3	
Dalton.....	2,263	23 6	25 9	
Orubian.....	2,412	25 6	21 2	Do.
Ar turus.....	1,525	20 2	20 2	
Kylestroms.....	2,105	22 0	20 11	
Novian.....	4,096	28 10	25 4	
Birmingham.....	2,612	24 3	24 3	

¹ Estimated.

IMPROVEMENT OF MOBILE HARBOR, ALA.

Net tonnage and draft of vessels leaving Mobile—Continued.

SEASON JUNE 30, 1913, TO JUNE 30, 1914—Continued.

Name.	Net tonnage.	Dead- weight draft.	Draft leaving Mobile.	Where bunkered.
		<i>Ft. in.</i>	<i>Ft. in.</i>	
Seythian.....	3,028	25 0	20 5	Mobile.
Nessian.....	4,012	28 10	25 10	Do.
Albanian.....	1,876	21 9	22 5	Do.
Nitonian.....	4,066	28 10	20 2	Do.
Andromeda.....	1,546	22 0	18 7	
Nestorian.....	4,075	28 10	23 5	Do.
Nubian.....	4,067	28 10	25 11	
Strathnairn.....	2,812	23 0	20 8	
Kylemhor.....	1,932	21 0	18 11	
Ninian.....	4,068	28 10	25 7	
Nicosian.....	4,097	28 10	23 1	Do.
Naplerian.....	4,101	28 10	24 11	Do.
Norwegian.....	4,056	28 10	26 7	
Montauk Point.....	3,026	26 0	24 5	
Average.....	3,045	25 3	21 8	

SEASON JUNE 30, 1914, TO JUNE 30, 1915.

		<i>Ft. in.</i>	<i>Ft. in.</i>	
Kylstrome.....	2,105	22 0	18 10	
N storian.....	4,075	28 10	26 6	
Albanian.....	1,876	21 9	22 1	Mobile.
Orubian.....	2,412	25 6	21 0	
Kylemhor.....	1,932	21 0	13 6	
Kylstrome.....	2,105	22 0	19 4	
Kyls'in.....	1,976	21 0	20 2	
Alexandrian.....	2,899	26 6	23 0	Do.
M'ltonian.....	4,066	26 6	22 0	Do.
Belgian.....	2,364	22 10	20 1	Do.
Kyl n ss.....	2,206	23 0	23 6	
Kylemhor.....	1,932	21 0	19 11	
St. Quentin.....	3,191	26 6	22 3	
N storian.....	4,075	28 10	23 5	Do.
Albanian.....	1,876	21 9	22 0	Do.
Kylakin.....	1,976	21 0	21 2	
Alexandrian.....	2,899	26 6	26 4	Do.
Norwegian.....	4,056	28 10	25 1	Do.
Plutarch.....	3,587	27 0	23 8	
Nubian.....	4,067	28 10	27 4	Do.
Kylakin.....	1,976	21 0	20 11	
Amst idyk.....	4,231	28 6	27 5	
Average.....	2,813	24 7	22 3	

¹ Part cargo only.

SEASON JUNE 30, 1915, TO JUNE 30, 1916.

		<i>Ft. in.</i>	<i>Ft. in.</i>	
Nubian.....	4,067	28 10	27 11	Mobile, July.
Orubian.....	2,412	25 6	26 0	Mobile, August.
Kylemhor.....	1,932	21 0	20 0	Do.
Napierian.....	4,101	28 10	26 3	Mobile, September.
Kylemhor.....	1,932	21 0	20 11	Mobile, October.
Sylvanian.....	3,009	24 9	25 5	Mobile, November.
Alexandrian.....	2,899	26 6	24 9	Mobile, January.
Kylemhor.....	1,932	21 0	20 3	Do.
Sylvanian.....	3,009	24 9	23 1	Mobile, February.
Nicosian.....	4,097	28 10	26 6	Mobile, March.
Orubian.....	2,417	24 10	25 4	Mobile, May.
Nubian.....	4,067	28 10	26 10	Do.
M'ltonian.....	4,066	26 6	27 0	Mobile, June.
Sylvanian.....	3,009	24 9	24 0	Do.
Average.....	3,070	25 5	24 7	
Excluding Kylemhor.....	3,380	26 7	25 9	

It seems that N type of ships of the Leyland Line can not get to Mobile and load their dead-weight capacity, and that applies also to all the largest-sized steamers. They can not take coal, and that ought

to be one of the things to be remedied, because this coal situation at the Atlantic ports is very serious. We should have 30 feet of water just as quickly as we can get it. I am going to read you exactly the reasons I base that on:

(1) Because the largest Gulf steamers, those most economically operated, and which furnish the cheapest ocean transportation, can not come to Mobile until 30 feet of depth is provided, such, for example, as the larger steamers of the Leyland Line, those of the N type, which draw 28.10 loaded in salt water and 29.4 loaded in the fresh water at Mobile.

(2) Because ports of the size of Mobile, which ranks tenth in the total value of exports and imports in the United States, and eleventh in net registered tonnage of vessels entered and cleared in foreign trade—which foreign trade requires the largest steamers—should certainly be as well equipped as to channel depth as those ports upon Gulf and South Atlantic which handle a less volume of tonnage, such, for example, as Texas City, Port Bolivar, Pensacola, Key West, Fernandina, Brunswick, Charleston, etc.

(3) Because Mobile can not fairly compete with New Orleans and Galveston on one side and Pensacola, Savannah, Brunswick, etc. (all having 30 feet or more) upon the other side until Mobile has 30 feet at least.

(4) Because Mobile has an uncertain tide, a tide greatly affected by the north winds of winter, which shallow the water from 3 to 4 feet, this being the difference between the high-water expectancy at which ships deeply laden leave port and the water actually left by the northers of several days' duration. Also, because of fresh water at Mobile, there is a loss of 6 inches in draft as compared with ports having salt water. A steamer drawing 27 feet loaded at Mobile, in fresh water, will draw 26 feet 6 inches at Pensacola, in salt water, with the exact same cargo.

(5) Because the completion of the locks and dams of Alabama's river system will influence the movement to Mobile of vast amounts of coal, iron, steel, cotton, hardwoods, staves, etc., from that territory, richer in natural resources than any section of the South, one city alone, Birmingham, producing more tons of freight yearly than the entire State of Georgia.

(6) Because Mobile—the only port in Alabama and the logical port for concentration of the large tonnage of Alabama, including 1,125,000,000 tons of iron ore and 57,600,000,000 tons of coal in its area of 52,230 square miles, and also the nearest port for the tonnage produced in one-half of Mississippi with its area of 46,810 square miles, a combined territory greater than that of all the New England States combined—should receive the lowest ocean rates obtainable from the largest steamers operated in the Gulf and requiring channel depth of 30 feet or more.

(7) Because the millions of dollars spent by the Federal Government in creating year-round navigation to the coal and iron fields of Alabama, and in opening up 1,500 miles of navigable streams, would be largely nullified if there was a lack of deep water at Mobile, the natural port for breaking bulk.

(8) Because less than 30 feet at Mobile means the necessity of forwarding large quantities of coal, iron, steel, etc., at an expense of at least 30 cents per ton to ports beyond Mobile where the larger steamers of the Gulf must go to load. To avoid the necessity of forwarding annually beyond Mobile just 150,000 tons of coal and iron would pay the interest upon the additional \$1,000,000 necessary to provide 30 feet at Mobile.

(9) Because steamers of the larger class, between 8,000 and 12,000 tons, after loading at New Orleans and Galveston, and which mainly coal at Pensacola and Norfolk, can not possibly come to Mobile for bunker coal until 30 feet or more of depth is provided.

(10) Because Mobile, being the nearest port to the iron and steel supply of Alabama, requires a deeper channel for this very dead-weight cargo than ports upon the Gulf and South Atlantic with their lighter cargoes of cotton and lumber.

(11) Because Mobile, left with a 27-foot channel, must continue to select steamers to be operated in trade to Europe, South America, Cuba, and Pacific coast, to guard against steamers being loaded too near the bottom, there being numerous complaints from owners of ships that Mobile is not a safe port for some of the steamers already loaded at Mobile.

(12) Because Mobile, with more ship repairing facilities, both steel and wood, than all the Gulf ports combined, possessing more skilled machinists

than any port upon the Gulf, and having the cheapest coal of any American port, should be made available as a repairing and coaling port for the United States Navy. And these facilities should be made available at the earliest possible moment. Twenty-seven feet of depth, with requirements of the Navy of several feet under keels, would prevent the accommodation of any of the larger warships at Mobile. It would seem that the \$40,000 per year spent by the Federal Government in interest charges to create a 30-foot channel would be well spent if for no other purpose than to open the repairing facilities at coal at Mobile to the United States fleet.

In the last analysis, the question to be determined is: Shall the Federal Government incur an annual interest charge of \$40,000:

To provide 30 feet at a port ranking tenth in size in exports and imports, eleventh in net registered tonnage of vessels entered and cleared in foreign trade?

To place Mobile upon a parity with smaller ports which handle only one-quarter to one-half the tonnage of Mobile.

To enable more than 2,000,000 tons of freight valued at more than \$60,000,000 to obtain the lowest ocean rates possible by making Mobile a safe port for the largest steamers operating in the Gulf.

To guarantee that, through the millions of dollars spent by the Federal Government in locks and dams, the coal, iron, and other resources of Alabama shall enjoy the largest market and widest distribution upon reaching the water at Mobile.

To make available to the United States Navy both the cheapest coal in America and the largest ship-repairing plants upon the Gulf.

To permit the saving of 30 cents per ton upon all the coal and iron, steel and steel products necessarily shipped by rail and by barge beyond Mobile, to be loaded aboard the larger steamers at New Orleans and other ports and to relieve the railroad congestion to that extent.

As the Government has spent some \$13,000,000 in the improvement of the river system of Alabama, and something over \$7,000,000 in the harbor at Mobile, it should certainly expend the extra 5 per cent to get the greatest use out of that expenditure, and spend that money right away.

Mr. SWITZER. How does the traffic on this improved Warrior River compare with last year and the year before?

Mr. TURNER. The last lock was only completed recently. We have not really been able to make a comparison for any period of time, because they were only operating through some of the lower locks until the Government finally completed Lock No. 17, handling about 25,000 tons each month.

Mr. SWITZER. The traffic was about 25,000 tons a month?

Mr. TURNER. About 25,000 tons a month.

Mr. SWITZER. Mostly barge traffic?

Mr. TURNER. Yes, sir. Now, there is serious consideration being given by the Shipping Board and the Fuel Administration and other boards—

Mr. SWITZER. The Government could direct this traffic to go to the water?

Mr. TURNER. Yes; but it is a question of getting equipment. Barging is no poor man's business. It requires quite an expenditure to do it properly. The overhead expense is so much that you can not afford to spread it over a few towboats and barges. You have got to have an extensive equipment, and you have got to handle it in a large way. I say, the Government is looking over that situation and has not been down there studying this very problem.

There is coal all over Alabama; some along the river banks possibly only a half mile back from the water's edge. That is not so good as some coal farther back. Really, if proper facilities were pro-

vided to bring it down, millions of tons could be brought over the Frisco road and others and taken to Mobile, but up to the present time barges have not been built upon any extensive scale.

This last lock has only been completed recently. They have not had an opportunity to do much. Six self-propelled barges were constructed to carry coal to New Orleans.

Mr. SWITZER. What is the cost of constructing a barge? What amount of tonnage do they carry?

Mr. TURNER. They carry about a thousand tons; they are a couple of hundred feed long.

Mr. SWITZER. They probably cost twice as much now as they did heretofore?

Mr. TURNER. I suppose so. There are two types of barges—one a self-propelled barge and the other a cheap coal barge of open wood construction which they tie to towboats and push down. But that all requires considerable money, and as yet barging has not been fully developed. Some of the coal people have had trouble with the railroads, and of course there is not any great love between the railroads and the river people.

Mr. SWITZER. And that is not lessening.

Mr. TURNER. But everybody has more business now than they can possibly handle.

To speak of this situation from just one other angle, as a war measure. I suppose nearly everybody who comes up here has a project which he thinks is absolutely necessary for the successful prosecution of this war, and thinks we could not win the war unless his particular project went through.

But I have looked at it not only from the point of view of Mobile as a port, but from still another view. The port of New York handles as much tonnage as all the ports from Charleston to the Mexican border combined. We all know that port efficiency is limited by the railroad efficiency. The ports can do no more than their railroads can do. I spent some three months up along the Atlantic seaboard late in the fall, and I found New York, Baltimore, and other places I visited so congested that you could not get a warehouse. The railroads can not unload the cars. They have got to send that tonnage somewhere; they have got to send it to Charleston and other southern ports. You are building up a vast fleet of boats; you are building these steamers everywhere. You have got to load them, and, furthermore, the Government has got to take from the contractors the things they make—these war munitions. If you do not take these war munitions the manufacturers can not continue to make them. And if you do not continue to use cars as they are available your railroad equipment will have no efficiency.

Mr. BOOHER. What is the draft of the boats they are manufacturing now in the United States?

Mr. TURNER. In the United States—I could not absolutely tell you, but I think most of the larger boats would draw about 28 feet, others 30 feet. A freight boat that will take 8,000 tons or thereabouts is really the most desirable size.

Mr. BOOHER. Could the 8,000-ton ships get into Mobile?

Mr. TURNER. Not with a dead-weight cargo.

Mr. BOOHER. How much water do they draw?

Mr. TURNER. About 28 feet. I have a statement from the pier in New Orleans, which will give you an idea—

Mr. BOOHER. Just let me ask you one more question. Are they manufacturing a great many of those boats that draw less than 28 feet?

Mr. TURNER. Yes.

Mr. BOOHER. Why could not they use those boats?

Mr. TURNER. They can use them, and no doubt they will if they have to. The United States Steel Corporation is building a plant at Mobile, which is going to be one of the great shipbuilding plants, and they are going to build the large type of boats. If you have goods to deliver, it is economical to use a big wagon instead of a small one.

Mr. BOOHER. If you have not got a wagon suited for that use, you can use a smaller one.

Mr. DEMPSEY. I understand from Mr. Turner that they have no control of this, and that they want to make a harbor big enough to accommodate the boats.

Mr. TURNER. They do not really build a wagon to suit the goods, but they build a wagon which they can use most economically.

Mr. BOOHER. After they build those 8,000-ton ships how are they going to get them out?

Mr. TURNER. There is going to be an economic waste, because they will have to send them to other ports to load to their dead-weight capacity. I want to emphasize one thing: They have been accumulating a lot of goods in warehouses at Mobile. I know of a particular terminal where there are some six cargoes of portable houses for the United States troops in France. They have a couple of stevedores loading loads of sewer pipe there which are going for use over in France. If they want to send them by those larger boats of the Leyland Line, they can not do so, because they can not load and get out. They would have to say, "We will have to wait until some boats come along that we can send to Mobile to take those goods," and that is an economical situation for the Government. When you eliminate all the ports from Norfolk to New York, which are pretty well up to their maximum now, then the ports from Charleston to the Mexican border will not only have to handle the normal tonnage but will overflow. You are building a great fleet of boats to move a great amount of stuff for the Army, and I think it will require about a dozen boats clearing every hour to take care of that.

Imagine the situation you have. It will not be wise to move the goods that territory east of the Mississippi River and bounded by the Great Lakes, the Atlantic, and the Gulf of Mexico the munitions and the food supplies across the Mississippi, down to Galveston and Texas ports, because that would be a railroad waste and we can not afford to waste transportation. Besides, those ports absolutely lack their facilities to handle what is going to be raised in that territory west of the Mississippi, the Texas crop, the cotton and the stock of the territory west to the Pacific coast.

You have the ports from Norfolk to New York congested, and their efficiency in any event is measured by the efficiency of the roads serving them. And the railroads are taxed to their capacity to handle the coal, the manufactured goods, and provisions absolutely essential to the life of this section.

You must then use the ports from Charleston to the Mexican border to relieve the congestion and to provide the necessary terminal facilities to accommodate the vast ship tonnage being constructed by the United States and Great Britain.

If the ports from Charleston to New Orleans can be speeded up to handle 50 per cent more tonnage than they ever handled before, you could then not handle through these ports more than an additional 10,000,000 tons of goods. If the ports from New Orleans to the Mexican border can likewise be speeded up to handle 50 per cent more than they ever handled before in their history, you can handle through such ports about 5,000,000 tons of additional goods.

When you consider that the United States is expecting to complete at least 3,000,000 net registered tons of shipping in 1918, capable of moving at least 6,000,000 tons dead-weight at one time, and that these ships will average about nine trips yearly, you can see that you will have a yearly tonnage to care for of over 50,000,000 tons. And remember that the British Government is building even more ships than the United States. Say they are capable of lifting 50,000,000 tons also yearly. Then you have something like 100,000,000 tons of goods to be moved through ports from Charleston to the Mexican border, which, when speeded up to 50 per cent more tonnage than they ever handled before, can only accommodate a total additional tonnage over and above what is now being sent through these ports of some 15,000,000 tons. From this you will see that the Government will need every port improved to the limit, will need every additional wharf and warehouse and railroad track that can be constructed during the year 1918. The funnel—the ports upon Atlantic and Gulf—can not take care of the prospective flow of tonnage which must be provided for at the ports if the ships under construction during 1918 are to be loaded and dispatched abroad.

Mr. DUPRÉ. How much do you think should be appropriated in this bill to meet the situation in Mobile; how much should be expended during the coming year?

Mr. TURNER. I think the entire appropriation should be expended. Three years ago the engineer recommended \$850,000. That was within a couple of hundred thousand dollars of the total appropriation. They recommended that for the reason that they had to have another dredge or they could not make any headway on this 30-foot project. It is going to cost a good deal of money to build a dredge. But also if you are looking at the first cost only, it costs considerable money to hire somebody else to do the dredging. If you build a dredge, of course, you come into the shipbuilding market, and I do not know whether it is a wise move to try to come in and take some of the labor already needed in order to build a dredge. But at least you could buy existing dredges if the appropriation is made so elastic as to enable you to go and buy them. In the Mobile district they have got to have another dredge to relieve those other plants, and if the Government buys a dredge they will really have a dredge left for use after finishing the 30-foot project. To get this 30-foot channel quickly we have got to have enough money to buy or hire some dredges.

Mr. GRAY. It has been suggested that contracts may be made with private firms.

Mr. TURNER. If you give us \$100,000, it will not dig anything. you give us the full amount, it will enable us to do something that will relieve this Government transportation congestion.

Mr. OSBORNE. Assuming that this appropriation was immediately available, how long would it take to complete that project and the channel you desire, by contract or in any other way?

Mr. TURNER. If they would appropriate all the money and an engineer would do as any business man would who was in a hurry, we have a very good engineer there now, and I think he would do it. My belief is we could dredge it in less than a year. You might have the full width of 300 feet, but you could dig a channel 200 feet wide to a depth of 30 feet and handle the ships, and then take your time to finish it. The ships could use a channel of 200 feet, but they would have to go a little slower. A narrow channel is not as economical to maintain as a wide one, because the propellers suck in mud from the sides. We will have to have a 300-foot channel eventually. But we could get through with a 200-foot channel without much trouble, and it would enable us to get these boats in and out and that would relieve this transportation congestion.

Mr. DEMPSEY. I would like to ask a general transportation question. As I understand you, the congestion at ports which are handling their maximum tonnage results from two things: Because the railroads from the factories to those ports are carrying all the tonnage they can, and because of congestion at terminals also, they have no place to unload the cars while waiting for transfer to the boats. If the Warrior River and the Erie Canal are open for transportation, why is not the quickest way and the surest way to relieve the factories to have the Government put the freight on barges and those waterways, and at the same time increase terminals in places like New York and Mobile? Why are those two things not needed?

Mr. TURNER. Those are two of the things needed.

Mr. DEMPSEY. I recognize that Mobile Harbor has got to have enough water to be used when the goods get there.

Mr. TURNER. It would not do any good if you could not get the goods on the boats. One of the things I noticed at the Atlantic ports terminals is that there is absolutely no teamwork. They put the cargo into a terminal. There may be five other cargoes trying to get to that terminal. The boat on which the first cargo of goods is to be loaded is sunk, and there is no boat sent to take its place, and the whole line the tracks waiting to be unloaded. The terminals are one of the weakest links in the chain.

Mr. DEMPSEY. They should have a director general to supervise the receiving and dispatching of freight from the ocean ports?

Mr. TURNER. Yes. You limit the elasticity of the railroads when you do not take the freight away from them as soon as the trains get there. That has always been the case. We had coming to Mobile in January 60,000 tons; in one particular terminal there were 25,000 tons of supplies of the United States Government; and unless boats are sent there it does not take long to fill up the whole place. You have got to speed up every port you have; you have got to increase your terminals; you have got to do everything you can to strengthen those weak links in the chain.

Mr. DEMPSEY. I think the chairman suggested that you say something about the terminals.

Mr. TURNER. In 1907 we handled over 3,000,000 tons of goods. Since 1907 we have increased our terminal facilities 77 per cent. We have 16,000 linear feet of docks.

Mr. DUPRÉ. What terminal do you represent?

Mr. TURNER. I am not here as the owner of a terminal, but I am talking for Mobile. Since we entered the war the Government arbitrarily took boats and sent them to the North Atlantic ports, they concentrated cargoes in those ports and soon congested every one of them, and our Mobile terminals have not been used to within 30 per cent of their efficiency. Then some of the ports like New Orleans were congested, while other ports were not used at all.

Mr. DUPRÉ. You do not mean to imply that they could not handle more than they do now at New Orleans?

Mr. TURNER. They have 20 per cent more tonnage than their normal capacity now, but if they send boats to New Orleans this port could handle more, and so could every Gulf port, but it would not take more than a month to block any port if ships were not sent, because the goods are moving in enormous quantities.

Mr. BOOHER. Is not the congestion of the railroad terminals as bad as the congestion at the seaports?

Mr. TURNER. Yes; but I think the seaports have put a large part of the burden upon the railroads. Where the railroads could not get the facilities for storing at the seaports, they have had to keep the goods in the cars and to line the tracks a hundred miles back.

Mr. DEMPSEY. I am told that actually there are great quantities of material in the city of New York that have become obsolete for war purposes.

Mr. BOOHER. My idea was that it was not simply on account of the lack of water, but that the railroads are also so congested that they can not get to the seaports.

Mr. SWITZER. I would like to suggest right there, after the congestion in New York Harbor, which has been congested for months and months, what would you say about a policy of taking freight from Texas, Arkansas, Louisiana, and northeast Alabama, that could reach these Gulf ports, and sending it to the Gulf? Would that help any?

Mr. BOOHER. That is the question. What would help it?

Mr. TURNER. That would help. It would not help unless you sent boats there. If there was sufficient coordination and they would send the boats to the ports which were not congested, you could move this tonnage. Now, you are building boats, and you are hoping to build them in sufficient number to move all necessary freight. The freight is going to come in a very large volume. We have just started on this war, and we have already put this coast line from New York to Norfolk entirely out of business. You have got to transfer it farther south to relieve that situation. You have got to move it from Charleston on down to these Gulf ports.

Mr. DEMPSEY. Mr. Turner, I understand the very thing you have suggested has been done within the past 24 or 48 hours. I understand that Mr. Franklin has been named Director General of Shipping and has been given full charge. He is the head of the International Mercantile Marine, and they say he is the best shipping

expert in the country. I understand he is to be given full charge of all shipping for both the United States and the allies.

Mr. TURNER. They generally take a man out of some one port knows his own port best and does not know anything about the balance of the country. If they would take one man from Orleans, one from Savannah, and one from several other places, could probably accomplish something. A man knows his own port but generally he does not know much about other ports. In New York they do not know that we are on the map, whether in Virginia or Alabama. Most of them do not even leave their offices to go down and take a look at the boats, but they do business all by telephone. They do not know what the balance of the country is doing, as a result I hope this congestion is going to be relieved, and there certainly should have been some teamwork in the past. They could have distributed that tonnage logically, sensibly, so as to move it with the least friction; they could have relieved the railroads long ago and terminals long ago, if there had been somebody directing it in sending it along in a sensible way.

The CHAIRMAN. Could you describe now, or, if not, could you furnish for the record a description of all the water terminals which you have there, and the ones which are owned by the city of Mobile, particularly as to those which are owned by the municipality?

Mr. TURNER. The engineers made a report on this blue print which figured it all out. I could introduce that blue print which will give you what you want.

The CHAIRMAN. We can not print that in the record. We will make a brief statement of the terminals which you have there and which are owned by the city, and their stage of completion.

Mr. TURNER. Well, the Mobile & Ohio and the Southern Railway have the largest terminals in Mobile. The Louisville & Nashville has terminals. The city of Mobile has about 1,250 feet improved, they have also sold bonds to the extent of \$600,000, to add quite another link to it. The company I represent has the largest independent terminal there, something like 4,000 linear feet of wharf front, which is in itself more than Texas City and Port Bolivar combined have got. I think that, with the linear feet of wharfage there is to build would have something like 20,000 linear feet. That is about all the wharves we will need for some time, unless the Government sends us a vast volume of goods, which will require a lot of warehouse space, and in that case the Government will have to build warehouses to take care of that situation. No individual would dare to spend millions of dollars to build warehouses, not knowing whether they were going to be used or not after the war.

Mr. DUPRÉ. Does the shipbuilding company contemplate the construction of any terminals?

Mr. TURNER. No; their plant is absolutely a shipbuilding industry to build ships. They are going to build ways to hold 10 ships at a time, and they are going to make steel plates at their Birmingham plant, bring them to Mobile, and put them into these ships.

Mr. SWITZER. Is the United States Steel Corporation going to build its own terminal?

Mr. TURNER. They are simply going to build ships at present, as I am told. Now, what they are going to do in the future, of course I do not know. There is a rumor that they are going to bring

manganese ore from South America and ore of that kind from Cuba, and mix it there with the ores from Alabama to make high-grade steel.

The CHAIRMAN. Let me put this proposition to you. Suppose some company in Birmingham should contract to send a shipload to some point, and should engage a ship to come into Mobile, and should not utilize any of the existing brokerage or other shipping exchanges at Mobile, but should act independently themselves, where could that concern and the ship itself, as a matter of right, dock and load, without regard to any privately owned terminal?

Mr. TURNER. Where could they go?

The CHAIRMAN. Yes.

Mr. TURNER. Well, they should be allowed to go to any terminal, for they are all public in the sense that they are used in interstate commerce. We fought out quite an issue on that before the Interstate Commerce Commission.

The CHAIRMAN. Are there any municipal terminals?

Mr. TURNER. Yes; they could go to the city wharves, where they have a large warehouse. They could also come to ours. The moment the ship came in the harbor the wharf companies would send their solicitors out to get the ship to come to their wharves, in order to get the wharfage charge out of the goods so there would be absolutely no impediment in the way of the ship getting its cargo loaded and getting out again. If the cargo came down the river, as a rule, I think it would be loaded in stream, where the ship would moor.

The CHAIRMAN. Is there any agency in the city of Mobile authorized to fix rates for the use of terminals?

Mr. TURNER. The State Harbor Commission has more or less jurisdiction. There is no complaint at Mobile over the charges. I do not think the charges at any of the railroad terminals—and they generally set the pace for all the terminals—are any too high. The railroads have always set the rates for the independent terminals, and, as a rule, the rates have always been abnormally low, growing out of the custom of the railroads of bidding for export and import business.

Mr. DEMPSEY. You mean the competition between the different lines of railroads?

Mr. TURNER. Yes; the railroads have made the terminal charges lower than anybody else can afford to build terminals and operate them under.

Mr. DEMPSEY. Because they depend not only on the wharfage, but on the haul?

Mr. TURNER. I have seen some things handled by the railroad that if I had to handle it upon the railroad basis I would give them my facilities free, I would give them my superintendence free, I would give them my warehouse free, and then I would pay 10 cents a ton for the privilege of having handled it. I have particularly in mind fertilizers and nitrates. After giving them everything free, you would have to pay 10 cents a ton for the privilege of having looked at it.

Mr. DUPRÉ. Where do you come in?

Mr. TURNER. I can not afford to handle it. I am only showing how the railroads lower the charges on these things and the keen competition there is between them to get the business away from each

other. The competition makes them do these things. I have been on the Pacific coast, and I have been everywhere, and I do not know of but two ports anywhere in the country that really get enough money out of the terminals to pay their operating costs and a fair interest on their investment. And even under the system in New Orleans, State owned, where the land did not cost them anything, and all they had to do was to build the improvements, they do not get any more than the interest on the improvements. And in Galveston, where they have one of the best systems I know, they only make a reasonable interest, about 5 or 6 per cent; that is all. And there they are up to date, and they handle their docks all under one head, and the minimum of facilities does the maximum of work.

The CHAIRMAN. We did not find but one up to date terminal at Galveston.

Mr. TURNER. That is the Galveston Wharf Company, and they own all of them, except what the Southern Pacific have.

Mr. KENNEDY. My recollection is that the criticism made of your terminal facilities by the engineers was that they were not modern. How about that? He said there were probably plenty of terminals, but they were not modern, as I recall, some of them at least.

Mr. TURNER. You ought not to speak about your own child, but frankly, I have not seen any of them better than what we have, anywhere from New York on down. We have got one built on a concrete foundation, with vitrified brick floors, and just one of the warehouses is 125 by 480 feet. Chairman Small saw fit, and it is a very good terminal. I have seen the terminal structures all over the Atlantic and Pacific, and it seems to me they have not got any that are better than what we have.

The CHAIRMAN. In this movement which the committee is making to try to induce the construction of adequate terminals, we find a disposition on the part of every city to claim that its own terminals are all that are necessary.

Mr. TURNER. Yes, sir.

The CHAIRMAN. We have had considerable correspondence, for instance, with cities and towns on the great Ohio River, and I think that correspondence develops that none of them will admit that their terminals are not adequate, and yet a representative engineer says that they are absolutely insufficient. Now, we saw terminals in Mobile that seemed to have ample water frontage, and the foundations were certainly stable and satisfactory, and, as I recall, if any criticism could be made of them, it was these two, that they did not have perhaps modern facilities for transferring freight, and that the connections with the railroads were not such as to give close physical connection between the rail cars and the ships.

Then, again, I submit for your consideration that the time has come when no great port like Mobile can afford to permit its terminal facilities to be monopolized by the railroads and by private ownership. The time has come when there must be at least one, or many more as may be necessary, adequate terminals, equipped in a modern way, owned by the public, regulated by the public, so that they shall be absolutely open to any ship, whether that ship is loaded through local agencies, or outside agencies. I would not for a moment suggest that you are lagging behind a number of other ports.

but I do submit those two suggestions for the consideration of your progressive city—terminals which shall be constructed in a modern way for transferring freight, and that shall have easy connection with all the railroads serving the port.

Mr. TURNER. And the next one is that we shall have public terminals? Now, let me see if we can qualify in those two regards. Public terminals—we have them; and there are a great many ports that I have mentioned that have not any that you have given 30 feet of water to. We have got the city wharf there at Mobile, and the new one they are planning to build is more extensive than the present one. You will find that a great number of places that I have mentioned, which you have given 30 feet of water to, have no public terminals at all. If you are going to class ports, we ought to be measured, good or bad, by the same board of engineers. We would class good as to public terminals.

Now, when it comes down to the accessibility to the railroads, there is not a terminal at present located within the active water frontage of Mobile that is not reached by every railroad coming into Mobile. If you are located upon the tracks of one railroad, that railroad switches into your plant, and the other railroads get into your plant by paying a \$2 switching charge to transfer the car.

The CHAIRMAN. Let me give you this illustration, which, according to my reading and study of the subject, is one of the essentials of a terminal: There must be, of course, water-front and warehouse facilities, and there must be a railroad track alongside of the pier between the ship and the bulkhead and the warehouse—at least one track, better two—so that cars may be loaded there along the pier between the ship and the warehouse.

Mr. TURNER. Yes, sir.

The CHAIRMAN. That there shall be also movable cranes operated by some power, preferably electricity, so as to take the heaviest products out of the ship and put them on the car and into the warehouse, or from the car or from the warehouse into the ship; and, if I am correct, those being the essentials of a modern terminal, is there a terminal in Mobile which has those facilities?

Mr. TURNER. After traveling over every coast line in America, I do not know of one port—not one—that can measure up to Mobile in that particular regard. Practically every track, practically every warehouse in Mobile has a wharf apron, as we call it, over which tracks are run and over which cars come alongside the ship. That has been our method of building our terminals at Mobile. In some other places, while it might be your idea of the right method, Mr. Chairman, this can not be done. Take New Orleans, considered one of the foremost ports and one of the best equipped of all: They can not run those railroad tracks and those locomotives out on their wharves. They do not dare put that weight on them, and therefore they bring the tracks behind the warehouse, possibly 250 feet from the water front, and everything is unloaded from the car and put on trucks and run to the warehouse, there unloaded, and then taken by stevedores onto the ship. In Mobile, for certain reasons, we can handle everything from the car to the boat, or from the car into the warehouse, and we have got tracks that run alongside of every wharf in Mobile. On my own terminal we have got them on both sides of

the slip, at the city wharf they have the same thing, and the Southern and Mobile & Ohio have the same thing.

But you can not generally unload from cars direct to ships. You must accumulate a cargo ahead of the steamer, concentrate it in the warehouse. You can not load that steamer with dispatch, you can not load a steamer in four days, which is our record, as against a couple of weeks in the northern Atlantic ports, unless you accumulate the cargo beforehand. When the cars roll in ahead of the steamer you have got to put their contents in the warehouse, and when the ship comes in you have got to truck the goods up to the ship.

Mr. DEMPSEY. In other words, you have got 9,000-ton steamers?

Mr. TURNER. Yes.

Mr. DEMPSEY. And the tonnage of a car is from 30 to 40 tons?

Mr. TURNER. Yes.

Mr. DEMPSEY. You have got to have 300 cars?

Mr. TURNER. Yes.

Mr. DEMPSEY. You can not hold over 3 or 4 cars, and certainly not over 7 or 8, in there at once? I mean for the purposes of unloading?

Mr. TURNER. For unloading; yes.

Mr. DEMPSEY. Loading them into the steamer?

Mr. TURNER. Yes.

Mr. DEMPSEY. And you would have to have 300 of them, and what you say is that it would be a more economical way to concentrate the freight in the warehouse and then load from the warehouse?

Mr. TURNER. Yes; for two reasons. One is that you can not tie up all those cars, which you would have to do; the second reason is that you could not load the ships as quickly from cars as you could if you had the freight concentrated in the warehouse. It costs you \$5,000 a day for every day that the steamer is delayed. They used to be worth \$750 or \$1,000, but now they are up to \$5,000, and every day you delay one of them it is worth that much money to you. You have got to have that freight in the warehouse in order not to delay your ships and you have got to load it just as fast as you can.

The CHAIRMAN. I do not understand you to be arguing against the necessity of rail tracks upon wharves.

Mr. TURNER. No; they are absolutely essential. You are absolutely right.

The CHAIRMAN. You are simply speaking now about slips for loading the ships?

Mr. TURNER. We must have these tracks; you are perfectly correct in that. When you get bulky cargo, especially a very heavy cargo, if you can possibly bring it to the ship as soon as she arrives, it is more economical to take that cargo and load it right from the cars onto the ship. But there is much of it that you can not load that way. In lumber ports they bring the cars with the heavy timber alongside of the ship and hoist them on board. They should have these tracks, but in some places it is impossible to have them. For instance, in New Orleans and in Montreal, which has one of the best systems of docks I ever saw, those tracks can not be constructed in some wharves because of physical obstacles. You can not run the weight out on some of them, because they will not stand it. They have to unload cars back on hard ground, back behind the warehouses. The general conditions have got to be considered at every port.

The CHAIRMAN. May I suggest that there are two books you might purchase some time, by Edwin J. Clapp, an American student?

Mr. TURNER. I have read them.

The CHAIRMAN. The ports on the Rhine and the port of Hamburg?

Mr. TURNER. I have read them. I know the conditions they have got over there. They build great big concrete piers down into the water, and they can run great weights out on them. As far as I know, there is not a port in America that has a solid concrete dock. We have got to take a back seat on that. We have not the money to build these concrete piers, and it took the Canadian Government to get back of Montreal, in order to build the concrete piers they have got there; the whole nation did that. But here the Federal Government does not build the terminals; they tell the people to build them, and those particular ports that have terminals such as you describe have had them built by the State or national Governments.

Mr. DEMPSEY. That is the competition of Canada for trade. Canada simply pays for the traffic from the canal to the St. Lawrence, and in order to get it she is willing to do that work. We are not willing to do it. We let them run away with it.

Mr. TURNER. It costs a lot of money to build such docks. The upkeep is a trifle, but it takes the longest pocketbook you ever saw. There is not a terminal in America that would pay one-half of 1 per cent, much less 6 per cent, on the investment on a concrete terminal of that kind at the present terminal charges.

Now, I would like to speak about one more thing, about this question of mechanical devices, which has been talked of a great deal. Now, that is governed so largely by the class of traffic that you have got, that you can not measure each and every port the same. If you had a solid cargo, take, for illustration, a solid cargo of coffee, coming into a port, you can make a belt arrangement that will run that coffee right into the warehouse. But there is only one port in the country that gets coffee, and that is New Orleans. It is the same way with coal, or oil. The people that build their own ships for handling the business they are interested in, build the equipment for receiving it and taking it away quickly. But when you come to a mixed cargo it is quite a different proposition. They have tried their best to devise something that would handle a car of lumber running from 12 to 40 feet long and next a car of flour, and the trouble is that when you are loading a miscellaneous cargo, you do not get enough of one class of material to warrant use of a mechanical rig. Then, the next problem you have got is this. Under the system of chartering steamers, which has been in existence for ages, the charterer has the use of the ship's winches. He simply pays the winchmen so much for their time for operating them. If you had your own mechanical device, you would have to pay those men for handling it just the same. Every steamer which comes has its winches. They have plenty of them and these steam winches are mechanical devices of great efficiency. You can load the boat anywhere with the ship's winches.

The CHAIRMAN. Do I understand you to be arguing that Mobile has reached the ideal in terminals, and you have had the last word on the subject, and there is not anything more that you have to learn, or have to do?

Mr. TURNER. No, sir; I do not say that. I am simply arguing point from the steamship standpoint. I say that is what you have got to consider.

Mr. GRAY. You have spoken very intelligently on the situation Mobile and the necessity of further improvement at this time, but want to get back to this point. You know the Army engineers have an idea of proceeding along certain lines. I will read this expressed by one of the engineers who recommends "that no work be done until some competent authorized legal agency has made and presented a plan for further transfer and terminal facilities, and it is made certain that a suitable plan will be pressed to completion at a suitable rate of progress."

Now, let us get back to a very interesting and important statement. I understood you to say that Mobile had voted or issued \$600,000 in bonds?

Mr. TURNER. Yes.

Mr. GRAY. Have not those bonds been sold?

Mr. TURNER. Yes; and the money is in bank.

Mr. GRAY. And the money is on hand?

Mr. TURNER. Yes; the land has been bought and the contract let for doing the work. They are asking bids on it now.

Mr. GRAY. Has a competent, authorized legal agency made and presented a plan and arrangement for further transfer and further terminal facilities in Mobile?

Mr. TURNER. Yes.

Mr. GRAY. It has been made certain that an extended plan will be pressed to completion at a suitable rate of progress, has it not?

Mr. TURNER. Yes.

Mr. GRAY. And that it will be completed at a reasonable rate of progress?

Mr. TURNER. Nobody can tell what the future may be. The cost of the work may finally be prohibitory. We can not tell what is going to be done. It looks to me like only the Government can afford to do anything at this day and time, but everything is being done now looking to that end. They have got the money, and they are going to spend it.

Mr. GRAY. In other words, you have fulfilled those conditions as expressed by this engineer, have you not?

Mr. TURNER. Yes; but I want to tell you that Mobile earns her protests against those conditions—for this reason, that if they were to measure a port by what it has got, they should lay the same conditions on all. Why should you stop making improvements in Mobile Harbor, which has more terminals and has got five times as great commerce as some of these other ports? That is my idea. That engineer ought to take every port from New York down. Why should not the same idea apply all the way around the coast? Why should you pick one fellow out and say, "You ought to do something"? They should all be measured by the same standard.

Mr. DUPRÉ. We have got to start on the right road somewhere. It does not mean that for Mobile necessarily; but under your theory it would never get started, because you were wrong in the past.

Mr. TURNER. No; I do not think so. I say if you are going to do this thing why don't you take every one of them? Why go

penalize New York, say, because they are congested, and say, "You can never have any more water." You are punishing the fellows that have got to ship through there. Why punish Mobile when we have more terminals than some other ports?

Mr. SWITZER. If you are given 30 feet of water, what do you say as to these conditions being absolutely complied with? If you are given 30 feet of water down there, or an increase to that?

Mr. TURNER. We do not want any conditions, and I will tell you why.

Mr. SWITZER. What I want to know is this: Will you people provide port facilities for the increased tonnage that will be brought in?

Mr. TURNER. How could anybody make that statement? To begin with, we do not know what you are going to send down there. In the next 12 months, if you continue building all these boats, I really look for every port in the United States to be in a state of congestion, such as has happened in the North Atlantic ports. How can any human being say, when you are turning out this vast amount of boats and propose getting an army over to France of four or five million men, that the facilities of the ports are going to be adequate? We can not furnish them. I object to any conditions, because you are penalizing us, and I do not think you ought to do it.

We have handled more tonnage than we have got now, with 9,000 linear feet of wharfage, and we have got 16,000 linear feet to-day more than half a dozen of some of those ports put together. With any reasonable movement of boats we could handle our tonnage, could handle more than we have ever gotten before, more than we ever dreamed of in the past.

Mr. DUPRÉ. When this project was adopted in the act of August, 1917, were not these conditions eliminated?

Mr. TURNER. Yes, sir; we went before the Senate Committee on Commerce.

Mr. DUPRÉ. I understand it is not operative at all. It does not exist except in so far as these recommendations were mentioned here, but Congress did not adopt it.

The CHAIRMAN. Mr. Turner, there is just one item I want to call your attention to, and that is the Big Warrior and the Tombigbee systems of rivers. That system has been completed at a cost of about nine and a half million dollars.

Mr. TURNER. Thirteen millions, I think.

The CHAIRMAN. I think that project alone was about \$9,000,000.

Mr. TURNER. Yes.

The CHAIRMAN. It is so stated here—\$9,721,396.

Mr. TURNER. Was that the Tombigbee alone?

The CHAIRMAN. The Big Warrior and the Tombigbee system and the little streams on that system. That has been under construction for a long number of years, and many of us who have been here some time remember the activities of Senator Bankhead when he was a Member of the House and a member of this committee also. Since then he has entered the Senate. The committee on that system of rivers does not at this time justify the expenditure which has been made for that improvement. The prospects of an increased tonnage, based both upon your statement and other information, indicates

that there will be an increased commerce. I would like to call your attention and that of the other gentlemen here, as representative of the commercial interests of Mobile, to the duty of your great power in cooperating and rendering the necessary assistance in the development of the commerce of that great system of rivers, which has not been completed. Too often, if I might express the opinion, large ports and cities like yours have stressed the development of the ports and neglected features in the way of interior rivers, and certainly the time has now come when these interior rivers must be developed. Whatever they may need in the way of additional transportation lines or terminal facilities in the different towns and cities along that system of rivers the commercial people of Mobile, by reason of their superior knowledge on the subject, to say nothing perhaps of rendering some financial assistance, but largely in an educational way, can be instrumental in speeding up the commerce on that system of rivers. It is a very fine system, traverses a great section rich in productiveness, to say nothing of the coal and iron ore; and this committee—I think I speak for the committee—am exceedingly anxious to see that system, now that it is complete, justify the expenditure and help the cause of river and harbor improvements, which will serve as an example to other sections of the country and, in the meantime, it will afford additional commerce to this port of Mobile.

Mr. TURNER. Mr. Chairman, to let you see how some of this very committee feel about this very project you are talking about, and just how interested we are in it, I will say that one member of our committee has gone to an executive session arranged by Senator Bankhead with the Shipping Board and Mr. McAdoo's department and the Fuel Administration this morning at 10 o'clock, and some of the rest of us are to give testimony in another way. Furthermore, I offered them absolutely free the use of a property I have for coal storage; and I believe that everyone in Mobile is intensely interested in this project and there is not anything that Mobile can do that it will not do to further that particular plan.

The CHAIRMAN. That is a very fine spirit, and you should cooperate with the Federal Government in building and furnishing boats of a suitable type for that river.

Mr. TURNER. May I say this, at this stage? What you gentlemen are primarily here asking for is an increased appropriation for the further improvement of the new project. Before the adoption of the project in the last river and harbor act, approved August 8, 1917, you had a project to be 30 feet over the bar, with a depth of 27 feet in the channel leading up to the city and Chickasaw Creek and 20 feet width. That project was adopted, and the last bill increased the depth over the bar to 33 feet, increased the depth in the channel of the bay and river up to the city to 30 feet, and widened the channel from 200 feet to 300 feet. The engineers have recommended for inclusion in this bill \$160,000 for maintenance and \$100,000 for the new project. You are seeking to have that recommendation of \$100,000 increased to a substantial amount. Here is the situation which has confronted the committee. In estimates of appropriations for maintenance and for the further prosecution of projects which have been heretofore adopted we, with

scarcely any exception, have been controlled by the recommendations of the Chief of Engineers. They base their recommendations of appropriations for the further prosecution of the projects heretofore adopted upon what they can profitably and wisely expend during the ensuing fiscal year. Now, they have only made the recommendation to which I referred. Mr. Gray, a member of this committee, a Representative from your State, has been insistently before the committee—I would not undertake to say how many times he has been before the committee—insisting that this appropriation of \$100,000 is insufficient and ought to be increased. We all appreciate the importance of the port of Mobile. You have simply emphasized and brought up to date this morning the commercial activities there, which, in your opinion, not only justify the wisdom of Congress in adopting this new project, but, in your opinion, should hasten the completion of the project. I took the liberty of saying to Mr. Gray that I would go with him to the Chief of Engineers and discuss this matter with him, realizing, from my individual viewpoint as a member of the committee, that we must have some standard, and that, so far as I could foresee, the committee would be controlled by the recommendations as to what could be profitably expended. We had an interview with Col. Newcomer, who is the immediate representative of the Chief of Engineers for river and harbor improvements, the Chief of Engineers being largely engaged now in purely military matters, and we failed to make any impression. He said he would look into the matter further. I talked to him over the telephone yesterday afternoon, and he told me that he had had a talk with the Chief of Engineers upon the subject, and they did not feel that they could recommend an increased appropriation. I asked them then, over the telephone, as Mr. Gray and I did in person on the occasion of our visit, why, and he stated that it was proposed to do this by the Government plant of dredges; that the report which we adopted contemplated the construction of a new and suitable dredge for that locality to engage in this work; that it was not the policy of the War Department now to recommend the construction of dredges, owing to the difficulty of getting material, the difficulty of having them built, and the greater increased cost of construction of dredges; and that this was all the money that could be profitably used, plus the \$160,000 for maintenance during the ensuing fiscal year with the Government plant which was available. We then asked him—and I repeated the question yesterday afternoon—why they could not enter into contracts and expend more money wisely and profitably. The reply was that it could be done much more completely by the Government plant; that it would be very much more expensive by contract; and that, in view of the greatly increased expense, plus the difficulty of finding contractors prepared to do the work, that they did not feel at liberty to recommend an increased appropriation based upon having the work done by contract.

Now, that is the situation up to date. You speak of the association of this project with the prosecution of the war. If you could by any means at your command bring about conditions which would induce the Chief of Engineers and the Secretary of War to recommend an increased appropriation, I think this committee would be very glad to recommend and include in the bill an increased ap-

propriation for Mobile Harbor. You spoke of the necessity of the large ships which are being built there by this Chickasaw shipbuilding plant, built under the general direction and supervision of the Shipping Board and Emergency Fleet Corporation, and that they were large ships, and that they needed a larger channel. It may possibly be that an interview with the Shipping Board would induce the Shipping Board to take up this matter with the Secretary of War, and that would result in a recommendation to increase the appropriation. I mention this matter in order to put you in possession of the situation. This committee will be governed, and must be governed. I take it, by these recommendations of the Chief of Engineers as to what can be profitably expended during the next fiscal year. That is the rule applicable to every other river and harbor in the United States, which will be recognized in this bill of appropriations either for maintenance or for the further improvement of uncompleted projects. This committee, in their deliberations so far have not increased a single appropriation above the recommendation. They have under consideration eliminating one small one, but no increase so far. That is the situation which exists now. You can bring about conditions which will induce the Secretary of War and the Chief of Engineers to increase the recommendations. I am sure I bespeak the sentiments of the committee in stating that the committee will be very glad to receive any such recommendation, and may I say that this is in order to be perfectly frank about the matter.

Mr. TURNER. Mr. Chairman, it almost seems an impossible task to send us back to them. I was in hopes that you were the supreme court, and not they; that they were only the court of appeals.

Mr. GRAY. You thought they were merely an advisory board; did you not?

Mr. TURNER. Yes.

Mr. GRAY. I thought so, too.

Mr. TURNER. Some gentlemen asked whether there was any place situated like Mobile—the same distance from the sea. I would like to answer that Mobile is from 32 to 33 miles from the sea, depending upon what point in the harbor you take. New Orleans is about five times that distance from the sea—one of the greatest ports in the country.

Mr. DUPRÉ. One hundred and ten miles.

Mr. TURNER. One hundred and ten miles—four times as far.

Mr. DUPRÉ. No; three and a half.

Mr. TURNER. Baltimore is a great distance from the sea, in just the same way. Savannah is about 26 miles, and Jacksonville the same way. The fact of it is that most of the big harbors are a long distance from the sea. If you compare us to New Orleans and Baltimore and some of these places, although we are a little distance from the Gulf, our two or three hours' steaming is practically nothing on the voyage.

There is one thing about this loading. One of the gentlemen made the remark about having to come into the Gulf to load, as against the north Atlantic ports. I would like to impress upon the men of the committee, because that is one of the important factors, that it takes six days' less running time from a north Atlantic port to Europe

than from a Gulf port to Europe. This time of six days is more than made up in dispatch we give the boats. I think you will find that the average loading time at north Atlantic ports is two weeks or more, which is not only due to cargo congestion but to labor conditions. Our average time in loading and dispatching boats last year was four days and a fraction. The American steamers that have come in for war munitions for France loaded in four days, so the six days on the ocean is more than made up by the decrease in the length of time it takes to load and dispatch the boats in the Gulf. We can get more cargo across in less time from the Gulf ports than from the north Atlantic ports.

Mr. BROOKS. Mr. Chairman, if you care to go into that discussion at all, we have here Mr. A. G. Ward, the president of the State Harbor Commission of Alabama, and if you care to take up the question of port regulations he can tell you just what they have done and what they will do. If not, there is nothing Dr. Ward would care to say about that.

The CHAIRMAN. We will be glad to hear from Mr. Ward.

STATEMENT OF MR. A. G. WARD, PRESIDENT STATE HARBOR COMMISSION OF ALABAMA, MOBILE, ALA.

Mr. WARD. Mr. President and gentlemen, in so far as the port regulations are concerned, that is given to the State harbor commission by the last legislature, and it regulates the charges and any rules or regulations that the State harbor commission may make in regard to the harbor. Now, we have from time to time made rules and regulations, always subject to the approval of the local United States engineer, and we have in almost every meeting had to establish new rules and regulations, such as the speed of boats, conforming to the United States harbor lines, and in the construction of ways and piers, and in all those improvements the United States engineers will not give a permit for those constructions until they have obtained the approval of the State harbor commission, and in every instance they submit the plans to us before they give the permit for the construction.

Now, I do not know whether there is anything else that I can say, except to say that we always cooperate with the United States engineers, and their recommendations in nearly every instance are carried out.

Mr. GRAY. May I suggest this: That in the last report of the United States engineer he states that that has not been done. Do you remember that?

The CHAIRMAN. Do you mean the annual report?

Mr. GRAY. Yes. Speaking of local cooperation, it says:

The only condition imposed by law is that no work shall be done under an existing project until local interests have established port regulations satisfactory to the Secretary of War. This has not been complied with.

Mr. WARD. The State harbor commission has established those regulations, and they have in nearly every instance been approved by the United States engineers. We have submitted to the department, and they have been approved from time to time, any regulations that are even suggested by the local engineers.

Mr. BROOKS. You adopted two regulations just a few weeks and made some new conditions?

Mr. WARD. Yes; as to speed of vessels in the river.

Mr. BROOKS. And you are working in full harmony now with engineers?

Mr. WARD. Yes; and have always done so.

Mr. GRAY. It is perfectly satisfactory to them?

Mr. WARD. Absolutely. We cooperate with each other.

Mr. DEMPSEY. Your regulations and rules are reduced to type, written and printed form?

Mr. WARD. They are.

Mr. DEMPSEY. And submitted in that form to the local engineer?

Mr. WARD. Absolutely, sir.

Mr. DEMPSEY. And they receive his approval?

Mr. WARD. Absolutely, sir.

Mr. GRAY. Has he ever made any suggestion that you have concurred in?

Mr. WARD. Absolutely has not ever made a suggestion since passage of that law creating the State harbor commission.

Mr. DUPRÉ. When was that?

Mr. WARD. That was in 1915.

Mr. LEA. Your authority extends to municipalities as well as harbors elsewhere?

Mr. WARD. Yes, sir; its power extends to the Mobile River and tributaries—Mobile Bay and all of the rivers that empty into Mobile Bay and as far up as the tide ebbs and flows down to and includes Fort Morgan, Ala.

Mr. LEA. Any individual has the right to make complaint and bring it before you, has he?

Mr. WARD. Yes, sir; always.

Mr. LEA. Or you can initiate proceedings on your own account?

Mr. WARD. Yes, sir.

Mr. LEA. And guarantee equal conditions to shippers?

Mr. WARD. Absolutely. That is regulated by this board.

Mr. LEA. You have charge of the wharves as well as shippers?

Mr. WARD. Absolutely.

Mr. BROOKS. Are there any complaints going on there now that you know anything about?

Mr. WARD. Absolutely not as to rates or any charges. We have had different interests in Mobile send to us their wharfage and the rate of dockage and charges.

The CHAIRMAN. Has your commission jurisdiction over privately owned water terminals?

Mr. WARD. Yes, sir; it has.

Mr. GALLAGHER. Do you fix charges there?

Mr. WARD. We do, sir.

Mr. GALLAGHER. They are uniform?

Mr. WARD. Uniform.

Mr. GALLAGHER. At all of these terminals?

Mr. WARD. Yes, sir.

Mr. BROOKS. I would like to ask you gentlemen to hear Mr. A. Parsons, a manufacturer of our city, and one of our most patriotic citizens there. He is now doing work for the Government, but

does not make him any less a good citizen. Mr. Parsons will speak of the manufacturing, and after he is through, if you will permit, I would like to say just a word in closing.

STATEMENT OF MR. A. J. PARSONS, MOBILE, ALA.

MR. PARSONS. There was some talk a little while ago with regard to the increased cost of dredges. I am an iron manufacturer myself, and I have great doubt whether we shall ever return to prewar prices. My opinion is based on the idea that labor will always cost more than it has cost in the past, partly through the Government having increased railroad wages, which increase is likely to be used as a measure for other labor, and also the employment of Government labor in shipbuilding. Manufacturers find that once wages are raised, it takes a long while to get them back to a lower level, and I do not think you are ever likely to find the price of labor anything like what it was in the low period. Nor will the price of material. I think, ever go back quite as low. I am convinced it will ultimately go lower after the war than it is at present, but I do not think it will ever go back to the old low point. There has been so much material absolutely destroyed in this war that the supply is reduced. For instance, the ore that is nearest to hand has been in these times of high prices gotten out and removed rapidly and at any cost, and good ore in the future will necessarily cost more money. The same with coal. The coal that is nearest has been mined, and the coal that is farthest off will come later on and will cost more to get out, so that while it may be true that the cost of a dredge is \$150,000 more to-day than was the case before the war, I do not think you will ever buy that dredge at the old price even after the war is over.

MR. LEA. But how much would a dredger cost?

MR. PARSONS. Four hundred and twenty-five thousand dollars.

MR. LEA. At the present price?

MR. PARSONS. The present estimated price.

MR. LEA. What is the life of a dredger?

MR. PARSONS. It depends a great deal on the character of work it does. Some classes of dredges last a great deal longer than others.

MR. LEA. Ordinarily, though?

MR. PARSONS. Oh, several years. I think the *Wahalak* was bought—

MR. TURNER. This one they have in use now was bought nine years ago, and the upkeep on it will run higher and higher each year as it gradually wears out. No doubt a dredge would last a lifetime if you spent sufficient money on it to repair it, but after it is about 15 years old, of course, it would be out of date.

MR. LEA. What kind of material is this to be dredged—loose material or hard?

MR. PARSONS. Soft matter—black mud and sand.

MR. TURNER. They have been using these dredges up in the shipbuilding plants, and I understand that the engineer is going to utilize one of them still further in shipbuilding work.

MR. PARSONS. I may mention that I do not make dredges. I am not interested at all in the manufacture of dredges; I am just giv-

ing the committee, as far as I can, my humble opinion as an iron man, engaged in the iron industry.

The commerce of Mobile, the manufacturing industries of Mobile engaged in shipping, have been very much increased in the past few years. Some of you gentlemen who were in Mobile have had the opportunity to personally investigate what has been done. For instance, the Chickasaw Shipbuilding Co. has bought 12,500 acres of land adjacent to the city of Mobile. It would only take 200,000 acres of land to do all the work and answer all the purposes of a shipbuilding plant. It is obvious, therefore, although we have no information on the subject, that the remaining 12,000 acres are to be employed in some large industrial enterprise. We do not think there is any doubt but that some day there will be steel manufacturing there. The union of the ores of Chile and Cuba with the coal of the Warrior River probably will result in making iron in Mobile. It would be unnecessary to buy so large a tract of land for such a purpose as building 10 ways for steamers, although that is a very large undertaking in itself. There are five other shipbuilding industries in Mobile to-day, one of which, the Alabama Dry Docks, is building two wooden cargo vessels and three mine sweepers, and is completing a wooden vessel of 500-tons capacity. In addition to that, the Alabama Dry Docks is repairing the ex-German steamer Lucile, a very large vessel, which you doubtless saw when you were in Mobile. The Mobile Shipbuilding Co. has a contract for 18 steel frame, wood-construction vessels, and the Murnon has a contract for 4.

Mr. GRAY. Where is their original home?

Mr. PARSONS. It is a Philadelphia concern. The Henderson Shipbuilding Co. is now building four submarine chasers. In fact, one of them has already been completed. The most complete and definite information as to the detailed plans of the Chickasaw Shipbuilding Co. is contained in the announcement of Mr. George Gordon Crawford, president of that company and of the Tennessee Coal, Iron & Railroad Co., as follows:

It is proposed to begin construction immediately on a shipyard upon the land recently purchased north of Mobile. Ten shipways will be laid down, and wharves of suitable capacity for fitting out the ships will be built. A large power plant, boiler shop, plate and angle shop, machine shop, steel metal shop, joiner shop, forge shop, storehouse and main office will be constructed.

Two large villages have been laid out, one for white and the other for colored workmen. Both villages will have paved main streets and sidewalks, stores and sanitary sewers, a pure-water supply and street railway and electric light service. About 1,600 houses of attractive appearance will be completed during the next 12 months. The health, safety, comfort, and recreation of the employees and their families will be considered in planning both the work and the villages.

For the purpose of supplying steel plates and shapes, suitable for building ships, the following construction is now under way at the general works: 40-inch blooming mill; a 110-inch plate mill; a 26-inch shape mill; 600 horsepower for employees.

In addition there will be constructed at Fairfield the following plants for the manufacture of parts and machinery for ships:

A plate and angle shop, a forge shop, a foundry, a machine shop; 400 horsepower for employees.

To secure additional steel capacity, a third converter will be added to the converting mill at the Ensley works, and additional open hearth furnace will be added of larger size than the existing furnace.

Judge Gary has announced that the Mobile plant will specialize on the 9,600-ton vessel recommended by the United States Shipping Board.

Vessels of this size draw too much water to permit of being loaded to capacity at Mobile with the present depth of channel, and this will naturally suggest itself to you as an additional argument in favor of immediate action.

I forgot the most important thing. The United States Shipping Board, in conjunction with the Alabama Dry Dock Shipbuilding Co., is building a 10,000-ton dry dock in Mobile. This dock will be primarily at the disposition of the United States Government, and, of course, it stands to reason that they must think a great deal of Mobile and its possibilities, or they would not make that large investment. The dry dock will be a floating pontoon dry dock, with a lifting capacity of 10,000 tons. The length over all 485 feet, extreme beam 116 feet, width between side walls 90 feet. The dock is to be composed of two sections, each having five pontoons; each pontoon to be removable in such a manner that it can be docked and repaired. The dock can be operated either as a single dock of 10,000 tons or as two independent docks, which will lift a boat of approximately 4,000 tons each.

The CHAIRMAN. Where is that dry dock to be constructed, with reference to the city?

Mr. PARSONS. Right near the city.

The CHAIRMAN. Below or above?

Mr. TURNER. In the city, within the limits of the city.

Mr. PARSONS. Within the city limits, almost in front of the city wharf. We showed you where when you were down there. I thought that might be of considerable interest, as showing the confidence the authorities have in our port. We are also the principal repair port on the Gulf. We do an enormous repair business at Mobile, and have always been a great repair port. We think we are justified in asking for some acknowledgment of that as an industry, apart from the tonnage that passes through the port of Mobile. The repair of ships is a great, a gigantic industry in itself, and when you consider the large number of men employed in it, I think it will appeal to you as being worthy of some consideration. I thank you very much, gentlemen.

STATEMENT OF MR. STEWART BROOKS, VICE CHAIRMAN JOINT RIVERS AND HARBOR COMMITTEE, MOBILE, ALA.

Mr. BROOKS. Mr. Chairman, I am very much gratified at the frank and confidential treatment that you gentlemen have given us, and I would like to say two or three things on little points that need attention, that came up during the statements of the gentlemen that I have asked the committee to hear.

Mr. Turner has given you a very fair statement about that dredge proposition, and those things look to me like the very vital things we have got to contend with. Engineers are technical men, and, naturally, they love a beautiful machine, and, temperamentally, they are just bent on applying this principle by building a beautiful, modern dredge and its equipment. I wish we could have it, but if

they undertake to build one for us now there will be some funerals in our town before we ever get the work started. Now, if we could get the engineers to lay aside in the present emergency their preference for building dredges, and go out and purchase, not ideal dredges but one or more of the best dredges that can be had, they would get us past this emergency. The very fact that the engineers are more and more doing their own dredging is more and more putting out of business the contract dredger, and the consequence is that if the engineers were to go out and pick up dredges—they might not be entirely satisfactory to the engineers, but they would do the work in a comparatively short time. The practical shipping interests of the country have been going out on the islands in the Gulf and hauling off wrecks that have been there for years and not considered worth pulling off, and remodeling them into emergency steamships for present use. It would not have paid four years ago, but it does pay now. I can take you gentlemen to my office window and show you 10 ways which are at present completed, and wooden steamships that are being built thereon; a thing they would not have thought of a few years ago. Now, if we can get the gentlemen of the Board of Engineers to do likewise in this emergency and forego the building of a beautiful, thoroughly modern dredge and buy or rent at once some of the dredges that can be had, it will help us very much. That is a point that is hard to go up against, but that is a thing we would like to have very much.

Now, there is another matter about the Warrior River improvement that has been suggested by some remarks made by members of your committee. I do not know that we ought to undertake to say in advance what a witness before another body is going to testify to, but I had a very full talk coming up on the train with one of our members, who went by invitation before the Fuel Administration to-day, as to what he was going to say about this improvement of the Warrior River and about using the Warrior River. This man has been one of the leading coal merchants of the South for years—bunker coal and domestic coal—and he is an expert on the subject and has been closely allied with the L. & N. road, which for years was supposed to be inimical to water improvement down there, and yet to-day he is in line with the policy of barging the coal down the river. He told me on the train coming up here yesterday that he was going to state before the Fuel Administration that, in his opinion the river, as now improved, was practically a railroad without equipment, and that for success to be had in the traffic on the river the Government or some very large concern would have to take the problem and handle it comprehensively, would have to take the problem as a mining problem, a carriage-to-the-river problem, a carriage-down-the-river problem, a loading-on-the-ship problem, and a marketing problem all in one. In other words, it is one big, broad comprehensive problem, and he is to-day somewhere in this city giving the advice to the Fuel Administration that somebody has got to take that handling up as a big problem, one comprehensive problem, with enough authority and enough money to make it go. That is a feature of the problem.

Now, there is one other matter. The chairman asked a while ago about the publicly owned terminals. Mr. Turner was asked about

that, but I think he missed telling a little more about the \$600,000 municipal improvement, bids for which will be opened, I think, on the 20th of this month. That is no chimera. The bonds have been sold, and the money is lying there in the Mobile banks subject to check of the city commission. That improvement is one the primary feature of which is a wharf 8,000 feet long, which will accommodate, when completed, 18 steamships 400 feet in length. It will have a magnificent turning basin inside of it. It is immediately below the city, within the city limits. It will connect by its own tracks directly with the L. & N. Railroad tracks, and the Gulf, Mobile & Northern Railroad, and with the Mobile & Ohio Railroad, our great traffic feeder track to the west, and by the Mobile & Ohio Railroad, with which is allied the Southern Railroad, which comes into the northern part of the city. There will be connections with every railroad in town, except the Alabama, Tennessee & Northern road, which has no line into Mobile yet. It looks as if that one terminal will absolutely solve the question. The amount of berthing space there will for many years to come absolutely kill the chance of anything like throttling competition by private interests, to say nothing of the big municipal shed you gentlemen saw, that big steel shed along the main front, which will berth four big steamships at one time. That shed is 100 feet wide and 1,500 feet long. So that I am pleased to tell you gentlemen that the city of Mobile is in the saddle and has its hands on the reins, and there can be no throttling of competition in port facilities at Mobile for many years to come. We are safe on that, and I believe I am safe in telling you so.

The CHAIRMAN. That is a very fine statement.

Mr. BROOKS. Mr. Dupré, Mr. Switzer, and one other gentleman, possibly, asked a few questions about this United States Steel Corporation shipbuilding plant. You gentlemen who were down there saw what they have done. For those of you who were not there, the little black lines down here on this map mean the city of Mobile, and the big black lines indicate the area that the United States Steel Corporation occupies. That territory up there is equal to 20 square miles of territory, and the United States Steel Corporation holds a fee-simple title to every foot of it. I show you gentlemen that just as an indication that these people mean to do tremendous things.

One of the members of the committee asked what will become of the 10,000-ton ships which will be launched at this great shipbuilding yard. These ships when launched will put in enough freight to ballast them, and then we will have to let them go to some other port to take on the balance of their cargoes.

May I add just one word about tonnage, our particular problem. I do not know how many projects you have got, but let me show you the difference between 27 feet and a little more than 27 feet. We are right on that line where it just simply plays havoc with us. You heard mention of the larger boats of the Leyland Line. The Leyland Line has two classes of boats known as the M class and the N class. Class M boats, like the Memphian, can just come in and out, loaded to their plimsoll marks. The large boats of the Leyland Line, N class boats, like the Nitonian, can not come in there and go out fully loaded, and the consequence is that they have got to be very careful what they put in that boat. The larger boats just simply

have to go out partly empty. It is the difference between 27 and 30 feet. The big port of Mobile is required to use a smaller, less economical boat, because of a lack of a few feet of depth, as we can not send the larger boats down our channel, and yet these large ports, with only a fraction of our tonnage, have the more adequate facilities of greater depth.

I do not want to take any more of your time. I think our committee has made such an excellent presentation that I would make no more if I said more. I thank you for your attention.

The CHAIRMAN. The delegation has made a very fine presentation. We are very glad to have heard from you.

(Whereupon the committee adjourned.)

NEW YORK HARBOR

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF HUDSON RIVER CHANNEL, CHANNEL BETWEEN
STATEN ISLAND AND HOFFMAN AND SWINBURNE ISLANDS, EAST RIVER
AND HELL GATE, HARLEM RIVER, HARLEM (BRONX) KILLS, THE CON-
STRUCTION OF AN ICE-BREAKING VESSEL FOR NEW YORK HARBOR,
AND SURVEY FOR BREAKWATER ON BAY RIDGE AND RED
HOOK SHOAL, NEW YORK HARBOR

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRE, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
HOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 30, 1918





NEW YORK HARBOR

COMMITTEE ON RIVERS AND HARBORS, HOUSE OF REPRESENTATIVES.

Wednesday, January 30, 1918—10.30 a. m.

The committee this day met, Hon. John H. Small (chairman) presiding.

The following members of the New York delegation entered their appearances:

Representatives Frederick W. Rowe, Isaac Siegel, Edmund Platt, Harry H. Dale, Chas. B. Smith, Thos. F. Smith, James P. Maher, Chas. P. Caldwell, Daniel J. Riordan, Bertrand H. Snell, and Stephen W. Dempsey.

The CHAIRMAN. The committee will come to order.

I received on yesterday the following telegram from the president of the Chamber of Commerce of New York, which will be placed in the record of this hearing.

(The telegram is as follows:)

NEW YORK, N. Y.,
January 29, 1918.

HON. JOHN H. SMALL,
*Chairman Committee on Rivers and Harbors,
House of Representatives,
Washington, D. C.:*

Regret impossible New York Chamber of Commerce to be represented at meeting before your committee to-morrow. This chamber has always vigorously supported all measures looking to improvement of New York Harbor, on the ground that increased efficiency for this port means increased facilities for the business of the entire country. We urge immediate improvement of East River, Hell Gate, and adjacent waters not only as a commercial but as a naval necessity.

E. H. OUTERBRIDGE,
President New York Chamber of Commerce.

Mr. Hulbert, are you ready to proceed?

Mr. HULBERT. Yes, sir.

The CHAIRMAN. I am sorry that there are not more members of the committee here, but when we adjourned yesterday we adjourned over to-day, and I was under the impression that we would have a telegram from you if you wished to make a statement to-day. There are several members out of the city, but we have a very reasonable attendance, and we have a committee stenographer with us. I merely offer that statement in explanation.

Mr. HULBERT. I had supposed you had under consideration the proposed annual bill.

The CHAIRMAN. We have.

Mr. HULBERT. As you wrote me that I might appear on the 30th I wrote back that that would be acceptable, and as nothing was said

about the time. I took it that the committee would meet at 10.30, heretofore, and that we might be heard as soon thereafter as a train got us in.

The CHAIRMAN. We have, practically, every day until this time.

Mr. HULBERT. There are four matters I wish to present.

The CHAIRMAN. You take charge of the hearing and introduce each one whom you wish to be heard.

Mr. HULBERT. All right.

There are four matters, Mr. Chairman and gentlemen of the committee, which I desire to bring up with respect to this matter, and personally I shall endeavor to be as brief as possible in order to give the gentlemen who have come over here full opportunity to be heard.

It gives me a feeling of homesickness to be back in this room again and yet I am very glad that since I have resigned from Congress and this committee it has been to take a position under the city government of New York City which will keep me in touch with this committee and with the Engineering Corps of the Army, as formerly.

The CHAIRMAN. That will be very gratifying to the committee.

Mr. HULBERT. I am glad to be assured of that.

STATEMENT OF HON. MURRAY HULBERT, COMMISSIONER OF DOCKS AND FERRIES OF THE CITY OF NEW YORK.

Mr. HULBERT. The Harlem River has been under improvement since 1878. In House Document No. 577 of the Sixty-second Congress, second session, a recommendation was made with a view to straightening the channel at the curve near Johnson's Iron Works. If the gentlemen will look at the map on the wall back of the chairman they will observe that immediately after you enter Harlem River from the Hudson there is a U-shaped bend. Upon the project there created there is a foundry known as the Johnson Iron Works. When it was originally contemplated straightening out the bend at that point it was understood that so much of the property of Johnson Iron Works as might be necessary could be purchased for a sum within \$1,000,000. The proposition placed before Congress was that if the State of New York would acquire and cede to the Federal Government the right of way for a channel connecting the two ends of the Harlem River on either side of the Johnson Iron Works, the Federal Government would cede to the State of New York the bend of the present channel, which, of course, would probably become obsolete when the new channel was completed.

We have a provision in the constitution of the State of New York which requires that any expenditure in excess of \$1,000,000 can only be made after the matter has been submitted to a referendum of the people.

With the breaking out of the war in Europe in 1914 the Johnson Iron Works assumed great activity and began supplying munitions and other war materials to the belligerent countries, and which they are now, I understand, furnishing to this Government, practically working 24 hours a day in 8-hour shifts. The result is that the Johnson Iron Works Co. have placed a valuation upon their property of \$7,000,000, which we believe is not only grossly excessive, but

is feared by the authorities of the State of New York that if condemnation proceedings were instituted to acquire the right of way it would be almost an impossibility to secure an award that would be less than \$1,000,000. That, of course, is entirely a matter of opinion. My information is that the attorney general of the State has advised the canal board that it would not be safe for them to institute proceedings in condemnation under this situation.

Mr. DEMPSEY. You would not have to take the property under the condemnation law, would you?

Mr. HULBERT. Whether we would have to take it under the provisions of the canal act or under the provisions of the general condemnation law, I don't know. However, with that situation in view and with another difficulty which I shall mention in a moment, when I learned that the governor of the State, in May, 1916, had notified the Secretary of War that the State was unable to carry out the terms and conditions under which this improvement was originally contemplated, I brought the matter to the attention of this committee, and at the next session of this committee, when the rivers and harbors bill was prepared, this committee inserted an appropriate provision for a resurvey of Harlem River.

That bill, although it passed the House, failed in the Senate. It is one of those bills that died because of the filibuster that was conducted at the end of the Sixty-fourth Congress. So the matter had to come before this committee anew at the special session of the present Congress in April of last year.

In the act approved August 8, 1917, that provision will be found in the reexamination of the Harlem River.

Another very serious impediment to navigation in the Harlem River is a bridge which was constructed by the city of New York about 1847, if I recollect the date correctly, known as High Bridge, which at that time, and for many years thereafter, was utilized as a means of conveying a water supply across the Harlem River into the Borough of Manhattan. By reason of improvements which have been made in the manner in which this city secures its water supply, that bridge is practically unnecessary. The manner in which the bridge was constructed—the pillars being, I think, only 80 feet apart and set up on supports that run like a pair of stairs, narrowway in the channel as they approach each other in the bed of the river—constitutes a very serious menace to navigation; and for some time the matter of the modification, or the complete demolition of that bridge has been under consideration, and it has been held up, very largely because different organizations in New York City, whose purpose is to preserve historical monuments, have felt that sentiment would prevail over the needs of commerce with respect to the continuation of this bridge in its present condition.

The War Department has power to direct the demolition or the modification of the structure and thus get somewhere in the matter.

The provision in the act of August 8, 1917, was inserted so that the district engineer at New York could review the entire question with regard to the needs of commerce and navigation upon the Harlem River, particularly in view of the fact that on the 15th of next May it is expected that the State barge canal will be opened to navigation. I might state in passing that the department of which I have the

honor to be the commissioner communicated with the department of water supply, gas, and electricity, which now has jurisdiction of the High Bridge, and that the commissioner of that department is at present time preparing a statement with respect to the necessities of the bridge and of the cost of its removal and the cost of its modification on two or three different plans, each one of which it is expected will relieve, to a very considerable if not complete extent, the obstacles to navigation at that point; and as soon as the communication comes to me from the commissioner of water supply, gas, and electricity, which I am sure I shall have within the next few days, I intend to transmit it to the mayor for the purpose of having it laid before the board of estimate and apportionment, which is the board of directors in our city government; and I have no doubt that it will be referred to the War Department for reference to the Engineer Commission for conference and recommendation.

In the act approved July 27, 1916, there was also a provision for the reexamination and resurvey of what are known as the Harlem and Bronx Kills separating Randalls Island from the main land of the Bronx—that is, that territory on the east side of the river from Manhattan, which is on the west side. The Harlem or Bronx Kill connects the Harlem River with Long Island Sound, or what is now called the East River, at that point. The Federal Government has always said that if the Harlem or Bronx Kills were deepened, vessels could pass from the Harlem into East River, and vice versa, in a few minutes, whereas now it is necessary for these vessels to go down the Harlem River to and through Hell Gate at Ninety-ninth Street and then pass up again through the East River, requiring approximately an hour's time to make that trip. I am told by men who navigate that particular portion of the harbor's tributaries that, depending whether you make Hell Gate Channel at high or ebb tide, sometimes vessels are detained for a period of six hours. If that be true, considering the scarcity of bottoms in New York and of tugs, many of which have been commandeered by the War and Navy Departments, then every time you are delayed six hours in passing that point you lose the use of tonnage to that extent; in other words, cutting out that delay would be the same as adding to the existing bottoms the amount of tonnage required to absorb that delay. The district engineer recently reported on the Harlem and Bronx Kills new project and recommended an improvement 300 feet wide and 18 feet deep, at an approximate cost of \$2,300,000, and adding that Congress should adopt this project unless and until the city of New York shall actually begin the removal or alteration of the High Bridge piers, and unless and until the State of New York provided the necessary right of way for straightening out the channel at the Johnson Iron Works.

With regard to the High Bridge proposition there is not so much difficulty, for, as I have stated, we are working that out, and I think we won't lose any time in doing it. But so far as the condition with respect to the Johnson Iron Works is concerned, we think it imposes terms that are so indefinite in their character, in view of the war urgency for the operation of the Johnson Iron Works at the present time, that the confirmation of that condition would delay the beginning of work on the Harlem or Bronx Kills until after

Mr. HULBERT. Besides that the State Barge Canal act contemplates and provides for a barge canal terminal at One hundred and thirty-eighth street, in The Bronx, which is on the East River, and the State Barge Canal act imposes this condition, that this State Barge Canal terminal shall be constructed if and when the Federal Government shall have improved the Harlem or Bronx Kills; so that if the Harlem or Bronx Kills project is made a condition upon which the modeling of High Bridge and the straightening out of the channel of the Johnson Iron Works are to be completed, to take care of the navigation that is expected to result from the opening of the barge canal, and if, on the other hand, the barge canal can not be completed, so far as furnishing the terminal is concerned to handle the commerce that you expect will come down there, until the State and they have made the two conditional improvements that the Government insists upon before the Government will improve the Harlem or Bronx Kills, you will not get anywhere, because until the one is provided the other can not be provided; and you are simply playing around the rosy."

Mr. SWITZER. There where the Johnson Iron Works are located, is there any way of taking care of that proposition other than the one suggested?

Mr. HULBERT. There are several ways. The engineer, in House Document No. 567, Sixty-second Congress, second session, submitted three plans by which it could be done. Of course the thing we have suggested in regard to that is this: The district officer in New York made his reexamination. I furnished him with the names of all the people I knew who were interested. I rather expected there would be a hearing, but they proceeded in the regular way and made up a report. The report is practically a confirmation of the existing project, which is, as I say, inoperative under its present terms and conditions. Yesterday I appeared before the Board of Engineers for Rivers and Harbors, and they have sent back to the district officer the report on the reexamination of the Harlem River, and if they give a hearing in New York and make it a public hearing, which the people interested may have notice of and have opportunity to attend, I believe we will work that situation out so far as the Johnson Iron Works are concerned. That will mean delay. That should not defer consideration at least of the Harlem or Bronx Kills project, which is an entirely separate and independent survey.

Mr. KENNEDY. Is there any assurance that this matter will be taken up by the city of New York?

Mr. HULBERT. Which matter?

Mr. KENNEDY. The High Bridge matter.

Mr. HULBERT. Yes, sir. I have just explained that we are proceeding with it as rapidly as it can be done.

Mr. KENNEDY. How rapidly can it be done?

Mr. HULBERT. I would not be able to make any better estimate of it than I would of how rapidly the rivers and harbors bill is going to pass through Congress. It will be as quickly as possible.

Mr. KENNEDY. Is there any likelihood that it will be attended to within three or four years, altogether?

Mr. HULBERT. My judgment is that it will be attended to before you have a rivers and harbors bill at the next December session of Congress.

Mr. DEMPSEY. Couldn't that be dealt with in the way you suggested?

Mr. HULBERT. The Army engineers could order that bridge moved, and they would have to take it down. But the War Department don't want to act arbitrarily. They want to let the people determine what is best for themselves from every viewpoint. I have suggested to Col. Newcomer that some action be taken by way of serving notice on the city that it must proceed immediately to remodel that bridge, even to demolish it, and that would expedite the matter. The new administration, which began on the 1st day of January, desires—and it is the mayor's desire; in a communication he has expressed it to me—to have this improvement completed without any unnecessary delay; and under his direction, I have been trying to expedite it as commissioner of docks and ferries.

On last Saturday, the 26th, at a conference held at my office, the following were present: Hon. John H. Delaney, commissioner of the department of plant and structures; Mr. R. G. Finch, representing the State engineer and surveyor; Mr. E. A. Byrne, chief engineer plant and structure; Mr. Olin J. Stephens, of the Bronx Board of Trade; Mr. Oscar A. Thees, of the Harlem Board of Trade; Mr. J. W. Bennett, former consulting engineer Borough of the Bronx; M. W. Kuehnle and Mr. J. H. Rostock, representing the United States district engineer's office; Mr. P. J. Feldman, of the corporation counsel's office; Mr. C. W. Staniford, chief engineer department docks and ferries; Mr. W. W. Brush, chief engineer department water supply, gas, and electricity; Mr. L. F. Haffen, consulting engineer Borough of the Bronx; Senator Sheridan; and Hon. Charles MacLean. At that conference, held in my office, three ways of handling this proposition were discussed. It was the sense of the conference that the report of Maj. Adams should be referred back to the local district engineer's office for reconsideration and hearing. It was also the sense of a majority of the conference that the structure of High Bridge should be removed. I merely cite that to indicate that we are moving heaven and earth in New York to get this thing through, and I think we are coordinating every department of the government of New York City in order to make this thing move with all celerity possible. We feel that with this disposition on our part to push this thing through without any delay, Congress will co-operate with us, so that there will not be any delay on anybody's part.

Mr. SWITZER. Can a regular towboat going down the Hudson River go through around the Johnson Iron Works?

Mr. HULBERT. We have several towboats that do take tows down there, but, in my opinion, they can not do it as economically and as efficiently as they could do it if the channel were straightened at that point.

Mr. SWITZER. I know; but do they take them around there now?

Mr. HULBERT. They do. But they are operating now with a smaller class of boat than they intend to operate when the S. Barge Canal is opened up.

There are two other matters now that I desire to take up. I do not know whether I should speak first upon those and complete my statement or whether I should suspend and allow these other gentlemen to speak on the Harlem River and the Harlem or Bronx Kills.

The CHAIRMAN. I think you had better complete your remarks. Mr. Hulbert.

Mr. HULBERT. Very well.

In the river and harbor act of August 8, 1917, I will read from page 2, as follows:

East River, N. Y.: For improvement in accordance with the report submitted House Document No. 188, Sixty-third Congress, first session, and for a 40-foot channel through East River and Hell Gate, in accordance with the report submitted in House Document No. 140, Sixty-fifth Congress, first session, \$1,250,000.

From the report of the Chief of Engineers for 1917 I read from page 221 as follows:

Existing project.—The existing project provides for a channel from deep water in the upper bay to the Brooklyn Navy Yard 40 feet deep and 1,000 feet wide; for a channel from Brooklyn Navy Yard to Throgs Neck 35 feet deep, with widths varying from about 550 to 1,000 feet, according to locality, to be deepened ultimately to 40 feet.

And from page 222 of the same report I read as follows:

The estimated cost, exclusive of amounts expended under previous projects, is \$900,000.

From the public press I notice that the Chief of Engineers has recommended a provision for 1918—I assume that means the fiscal year 1919—\$2,200,000.

In the first place, I do not understand that there is any equivocation on the part of this committee to comply with the 40-foot recommendation, and I don't see how the language, as I read it in the bill, is susceptible of any other interpretation. Secondly, the bill was a war measure, and the improvement of Hell Gate was regarded particularly as a war measure. If the improvement of East River is going to cost \$36,900,000, and even in a year when we are at war with foreign power you are going to appropriate only \$2,000,000, it will take about 18 years to complete it; and if it is going to take that long to complete the job, then it is not a war measure.

Now, we have had this experience, that a project, begun in 1868, for a 26-foot channel, when it was practically abandoned in 1913, was more than 70 per cent completed, and we have no 26-foot channel yet. Now, when that project was begun the commerce on the East River was very small, compared with what it is now. There has been an increase from \$1,500,000,000 to over \$4,000,000,000 since 1914.

Last fall the battleship *Texas*, one of the capital ships of the Navy, ran ashore at Block Island or Fisher's Island—I don't recollect which—just as you turn into Long Island Sound. She stove in her bow and filled with water. When they finally pulled her off she was awash at about 36 feet. They could not get her down through Hell Gate to the Brooklyn Navy Yard. You could not have gotten her down to the navy yard even if you had made the improvement in accordance with the Chief of Engineer's interpretation of the statute you passed last year. That vessel had to lie off the point where she struck until the weather moderated and they could take her the side way to the navy yard.

Mr. BOEHNER. What was the cause of that?

Mr. HULBERT. I don't know.

Mr. BOEHNER. You don't know?

Mr. HULBERT. I couldn't say; I don't know.

The thing I want to emphasize is that here we are with our country at war and this vessel floundered at the east end of Long Island.

with enemy submarines navigating all over the seas; and if by means the presence of that ship could have been communicated to an enemy a submarine might have come in at that point and sunk with the complete loss of the vessel; and the loss of that vessel—say nothing of the loss of human life—would have represented more than the cost of the construction of the Hell Gate project, and besides you would not have your vessel. It is not so long ago that the *Olympia* went aground off the east end of Long Island—I don't know on what island or reef. They could not bring her up to the navy yard through Long Island Sound, and could not take her around to Boston. She laid there several days until calm weather came. These are specific instances since the passage of this law, which was passed as a war measure, that show the necessity for this improvement give concrete evidence of the urgency for speeding up the work.

Mr. BOOHER. How much money was appropriated?

Mr. HULBERT. The recommendation was for \$6,000,000, but it was cut down.

Mr. DUPRÉ. Are you sure that you could spend that much?

Mr. HULBERT. I don't know.

Mr. DUPRÉ. Isn't it up to you to see?

Mr. HULBERT. Let me answer your question, if I may. When we came upon this committee we had a project before us of \$13,400,000 for the improvement of the East River. The recommendation made by the Board of Engineers, recommending the adoption of that project, specified that the improvement should be undertaken at the rate of \$500,000 per annum. When the engineers came before this committee, and in answer to questions propounded by myself, they said that because of the tremendous commerce upon the East River if you undertook to spend more than \$500,000 a year, you would interfere with the commerce that it would be uneconomical and not advisable to do so. And yet, after you had appropriated \$1,250,000 for the improvement of the East River, the Chief of Engineers appeared before the Senate Committee on Commerce and recommended the substitution of a continuing contract of \$5,000,000. That was the bill that failed due to the filibuster last year. The department recommended and the committee appropriated \$1,250,000 in addition to the amount then available, which was approximately \$750,000, so that there was available over \$2,000,000 last year. Therefore I say this, that if they could recommend an increase from \$500,000 to over \$2,000,000 in one year, and if the district engineer found as a result of his investigation, that you could spend \$6,000,000 within the fiscal year, if appropriated, I think it is a reasonable proposition that a substantial appropriation—in answer to the question of a friend from Louisiana—is altogether within the bounds of reason. I am told by engineers in New York that the entire project, so far as a through channel is concerned, can be undertaken and completed within three years; and if that is so, I would like to ask why it is necessary to let out the work to take 18 years.

Mr. DEMPSEY. You will not lose the money even if it is not expended.

Mr. HULBERT. No; of course not.

Mr. DEMPSEY. You have the work to do, but haven't the money to do it.

Mr. HULBERT. That is precisely it; and we can not do it without the money.

Let me say this, if I may: You have what may be termed a very heavy responsibility that, by the way, I would like to refer to. In the last bill you were good enough to include a provision for the appropriation of \$1,360,000, if I remember it correctly. No; that is not it; that is the total amount of the project. You appropriated \$1,000,000 to commence work on the project for the widening of the tunnel from the Battery to Canal Street in the Hudson River and for the removal of the shoal from Thirty-third Street along the east side of Hudson River to Sixtieth Street. I have brought to your attention the fact that the city of New York under a previous administration had constructed a modern, up-to-date thousand-foot pier at a cost of about \$4,000,000, for the accommodation of vessels drawing up to 40 feet of water; and after they had the pier constructed it developed that they had only 18 or 20 feet in front of the pier to get their ships in. This committee was good enough to put a provision in the bill that was passed on the 8th of last August, and other members stood on the floor of the House and ridiculed the work as a war measure, claiming that it could not be done in three years, and the war would be over. The shoal has been removed and the pier is accessible except for a slight bit of dredging that remains to be done in the slip, that is going on now; and the city of New York has turned that pier over to the United States Government, and it is intended to be used to load the largest steamship that entered New York Harbor prior to the war with supplies for our troops and our allies; and that was made possible by the fact that you carried that provision in that bill and passed it in the face of the ridicule that was heaped on it on the floor of the House on the ground that it was impossible to do the work.

Now, we have agreed to turn over to the Federal Government all the piers from Forty-fourth Street to Fifty-seventh Street on the Hudson River. In addition to that, the Federal Government has commandeered what is known as the Bush Terminal in South Brooklyn. In addition to that, we have turned over certain other piers in South Brooklyn for the exclusive use of the Navy. And I have in my bag my plans that I am working out for turning over other piers to the Government in New York Harbor. These piers, I am told by the War and Navy Departments and by the Shipping Board, are absolutely essential to the successful prosecution of the war; and in order to turn those piers over to the Government it will be necessary to provide other piers, because that means that the steamship companies that have been using these piers since their construction will be put out and will have to find accommodations elsewhere.

Mr. GALLAGHER. What are the Bush Terminals? It is probably generally understood what they are.

Mr. HULBERT. They are terminals over in South Brooklyn owned by the Bush Terminal Co., and in connection with them the Bush Terminal Co. have warehouses, and there are a lot of manufacturing industries immediately back of the warehouses; in other words, it is a coordinated terminal enterprise over there that is intended to facilitate manufacturing and shipping. The Government has taken

them over and will make a great Army depot there. More than I do not wish to say about them. Perhaps it is unwise to say much as I have said. I think, however, that the matter has appeared in the public prints.

Mr. BOOHER. Do you know how much money was remaining the 30th day of June of this appropriation?

Mr. HULBERT. I don't know now.

Mr. BOOHER. It was \$1,800,000.

Mr. HULBERT. That may be.

Mr. BOOHER. So that if you get this appropriation of \$2,200,000 you will have \$4,000,000.

Mr. HULBERT. I don't think it is enough. I think that money is largely obligated by contracts that are being worked on. As Denipsey says, it is not doing any harm to appropriate the money because it won't be lost if it isn't used. My suggestion is—and I can not urge this too strong when the object of improving waterways is to accommodate the Navy—that a lump-sum appropriation be made for New York Harbor, to be expended if, when, and where the Secretary of War, or the Chief of Engineers deem it necessary and advisable; because, Mr. Chairman and gentlemen, the circumstances under which we have to build piers are such that we have to build the piers where the people will use them. We may, for instance, have a concern that will go over to Staten Island and build a pier over there only because the nature of their business is such that they can be accommodated there as well as anywhere else. There are others that will insist on piers in other parts of the harbor where perhaps the water is not deep enough to enable their ships to get up to the pier without improvement of the waterway. If it is desired to be constructed at a certain point, we want to know for the War Department that if we undertake to construct that the War Department will simultaneously undertake the improvement of the channel approach, and that they have the money with which to undertake it without having to wait for Congress to convene.

Mr. DEMPSEY. In reference to the congestion of freight traffic, not alone that there has been great freight congestion in New York during the present emergency, but it was congested for a long time with a large amount of Government shipments that had been coming in there for shipment abroad.

Mr. HULBERT. There is no doubt about that.

Mr. DUPRÉ. Did you advocate lump-sum appropriations when you were a Member?

Mr. HULBERT. I have always been an advocate of continuing projects.

Mr. DUPRÉ. That is not answering my question.

Mr. HULBERT. I have not, as a general proposition, favored lump-sum appropriations, but to any rule there is always an exception. This is necessary for the emergency that exists, because the country is at war; but that was never put up to me on a lump-sum proposition. What I was not in favor of was a proposition to make a lump-sum appropriation to be distributed all over the whole United States, such as the gentleman has reference to, as provided by the Buchanan amendments in the Senate to the bills passed by this House.

Mr. SWITZER. It is proposed to use the southern ports now, such as Galveston and New Orleans and—

Mr. HULBERT (interposing). Not Galveston, but Charleston and Savannah.

Mr. SWITZER. It says so in the newspapers.

Mr. HULBERT. It may be in the newspapers.

Mr. SWITZER. The use of these ports will help to relieve the port New York.

Mr. HULBERT. There is no doubt about that.

What I want to call your attention to is the fact that you are spending out millions and millions of dollars to build additional tonnage, and you will have to have adequate facilities for handling when you get it in operation.

Mr. KENNEDY. Do you mean the lump-sum appropriation should be made wherever the engineers think the work should be done?

Mr. HULBERT. In New York Harbor.

Mr. KENNEDY. Without regard to whether the project has been adopted by us or not?

Mr. HULBERT. No. You misconstrue what I had in mind. There has always been a project adopted for the improvement of the East River.

Mr. KENNEDY. For the improvement of East River?

Mr. HULBERT. Yes; and for the improvement of the Hudson River. There is a project before this committee, which we have tried unsuccessfully to get adopted, for the improvement of Bay Ridge Channel.

I am not interested in that now, because the Quartermaster Department must do the very thing now that I suggested you ought to do last year, to use the Bush Terminals. They have the money to do that. It is an Army project and is under the jurisdiction of the Quartermaster Department. That work would have been finished and ready for the use of the Army if we had acted promptly on it then, just the same as the Forty-sixth Street Pier is now.

Mr. KENNEDY. You have not answered my question.

Mr. HULBERT. I will answer your question. We do not intend to build any piers in New York City at any point except on the East River and on the Hudson River, and perhaps in the lower bay. Any pier that we construct on the East River—perhaps I am not able to say this authoritatively without examining the report—will be covered by the project that has already been adopted. That is also true of anything we do on the Hudson River. But I do not believe, in this emergency, that you ought to tie us to that, for this reason: Congress, so far as this committee is concerned, has not heretofore authorized the appropriation of any money for any project that has been examined into and adopted; but Congress has authorized, as a war measure, the Quartermaster Department of the Army and the Navy Department to dredge all channels wherever they may deem them necessary. If that has been done as a war measure in those departments, why not do it, through the Engineer Department, with reference to New York Harbor?

Mr. BOOHER. If this is so necessary as a war-emergency measure, haven't the War and Navy Departments the power to dredge it?

Mr. HULBERT. No; because they do that only in connection with projects for their own purposes.

Mr. BOOHER. Isn't this for war necessities?

Mr. HULBERT. It is for commercial necessities, but it is primarily for the purpose of letting us surrender property for government purposes and build other facilities for those needing them. Suppose the Government should say, "Here is a pier we want." Suppose it were impossible for the city of New York to authorize the construction of another pier to accommodate the vessels that had formerly been accommodated by that pier which the Government wants. Suppose we said to the Government, "We can't let you have that pier." Why, New York City would immediately be charged with holding up the war.

Mr. DEMPSEY. You make a suggestion. Your suggestion is, I understand it, that the Army and Navy, for what are properly termed Navy purposes, can do this port dredging but can not do it for commercial purposes, even if intimately connected with and necessary for the successful prosecution of the war.

Mr. HULBERT. Yes, sir.

Mr. DEMPSEY. If you had a lump-sum appropriation for this emergency, as you suggest, that would enable you, would it not, to do necessary work?

Mr. HULBERT. Precisely.

Mr. DEMPSEY. Suppose, after the lump-sum appropriation is made, you obtain, as you will make an effort to obtain, arrangements with the Johnson Iron Works, then you will have means at hand with which to conduct and carry on your improvement. You have your lump-sum appropriation ready to use anywhere you need it.

Mr. HULBERT. Well—

Mr. DEMPSEY. Knowing that the money was available, you would go ahead and get the consent, or make the arrangements, of whatever may be necessary, to carry on the work.

Mr. HULBERT. We don't intend to build any piers for the Johnson Iron Works. That is point one. Point two is this: The resurvey and the reexamination of the Johnson Iron Works, which was sent down by the district officer to the Board of Engineers, was returned and ordered returned yesterday by the Board of Engineers to the district officer, and we are going to have, as I take it, a hearing upon that proposition. There won't be anything done in regard to that until after the hearing and report is made by the district officer, and then a report by the Board of Engineers or the Chief of Engineers will be communicated to this committee.

The point I am emphasizing is that there should be some means of immediate relief of the situation, so that the work may be speeded. I agree with the suggestion made by Mr. Dempsey that if you can spend the money the Government will lose nothing. You can't lose it if you don't spend it.

Mr. DEMPSEY. That is right. The district engineer reported the time that there should be an appropriation of \$6,000,000. That is the situation, as I understand it. That has been modified here, and has been modified to \$2,200,000 right here in Washington, not in New York.

Mr. HULBERT. You passed at the last session of Congress, at the suggestion of the War Department, a provision for a 40-foot channel through the East River, as a war measure, and they tell you it will cost \$36,900,000; and yet if they appropriate only \$2,000,000 a year

will take 18 years to complete the work. If you will look at the map you will observe a tremendous undeveloped territory there, where Col. Newcomer is pointing [Bronx East River front]. New York is growing rapidly; we add 100,000 in population each year. If we wait 18 years to complete this work, you are tying a noose around your neck, and you can not get the people of New York to invest unless they know what the policy of the Federal Government is going to be in regard to these improvements. That is the difficulty that is confronting us.

Mr. DEMPSEY. When this proposed modification was up for consideration, did you appear before the Board of Engineers on Rivers and Harbors?

Mr. HULBERT. No, sir; I didn't have any notice of it. Nobody did give notice, as far as I know. I talked with Col. Newcomer about the Bronx Kills proposition both before and after we went to Texas in November and I think I sent a telegram asking that a hearing be held before the board; but we did not have an opportunity to appear upon any of the occasions when the matters were taken up. It was an ex parte proceeding. That is why we are here.

There is a bill before this committee, H. R. 9170, to provide for an ice-breaking vessel for use in New York Harbor. I don't want to get too extensively into that matter. I have a communication here from the tug towing lines in New York Harbor, showing the damages sustained during this unusual period, which is just as bad in other waters, except that it is not for so long a time. I have a letter from the admiral of the navy yard in New York and numerous other people. I have a statement showing the damage that has been sustained. The Cornell Steamboat Co. have 10 out of 20 tugs out of commission, representing a loss of \$45,000. I have a report from the Tyson people, showing that their loss—and this is for damage to the vessel, and not for loss of profit—is \$23,500. There is a long list of others. I will not take the time to read them, but I will file the statement.

The statement is as follows:)

DAMAGE TO VESSELS IN THE HARBOR OF NEW YORK OCCASIONED BY ICE, SEASON OF 1917-18.

JANUARY 28, 1918.

The following estimates have been received by the dock department as to the amount of damage sustained by tugs in breaking ice in the harbor this winter in order to place coal boats and other vessels in berths. This does not take into account the loss of the use of the equipment occasioned by delay in moving them—the additional towing charges—nor does it take into consideration the cost of the use of vessels owing to the lack of tugboats to move them. Neither does it include the loss of time and equipment due to the congestion of the drying facilities in this harbor occasioned by the extraordinary number of vessels of all kinds waiting to be docked. It should be borne in mind, moreover, that this work is very hard on tugs and considerable damage was done to the hulls, as well as to the copper sheathing on the bottoms of the vessels which can not be discovered until they are placed on the dry docks for overhauling.

	Damage.
Fred B. Dalzell & Co.	\$2,000
J. F. Harms & Co.	Unknown.
Hudson River Lighterage Co.	Do.
High Valley Railroad Co., 3 boats sunk.	Do.
New York Dock Co.	Do.

Owner—Continued.

Cornell Steamboat Co., 10 out of 20 tugs out of commission	Dam
Cement Lighterage Co., delay in movement of boats	\$45,
Cleary Bros., 5 boats damaged	No
Flower Lightering Co., sundry damage	Unkno
John E. Moore Co., sundry damage	
Jarvis Lighterage Co.	3.
King Transportation & Supply Co.	3.
Harbor Lighterage Co., delay	
Baltimore & Ohio Railroad Co.	3.
C. W. Crane & Co., delay	N
Rogers Lighterage Co., delay	
New York & Albany Lighterage Co., delay	
Carroll Towing Co., 1 tug sunk, 2 tugs wheels broken, 5 tugs leaking badly, 2 tugs broken planks	Unkno
Tice Towing Line	23.
Powelton Barge Co.	N
Wright & Cobb Lighterage Co., 1 broken propeller, 1 broken rudder	Unkno
Edward G. Murphy Lighterage & Transportation Co., 2 boats damaged, 1 boat sunk	
Thames Tow Boat Co., 2 tugs damaged	
Forest Towing Line, 4 planks stove in	
Moran Towing & Transportation Co.	
Ackerman Towing Co., 1 tug broke wheel, 1 tug unshipped rudder, 1 tug did considerable damage to stem	
New York, New Haven & Hartford, many tugs damaged, esti- mate of damage can not be arrived at until vessels are placed in dry dock	
Baltimore & Ohio Railroad Co., 13 cases of marine damage to tugs	
George L. Hammond & Co.	3.
Anthony A. Boyle, 3 boats sunk	68.
Long Island Railroad Co.	
Central Railroad of New Jersey, 6 tugs damaged, number of lighters damaged	Unkno
McWilliams Bros., 2 barges damaged, 3 tugs holes stove in bottoms	
General Towing Co., 1 powerful tug damaged and put out of commission	

Mr. W. B. Pollock, marine director for the railroads of New York, working under authority of Mr. A. H. Smith, assistant to the Director General of the railroads, under date of January 15, 1918, states:

"Yesterday there were no less than 31 railroad tugboats out of commission principally from the reason of damage sustained while towing vessels through the ice. * * * The ice conditions in the Arthur Kill and Kill Van Kull were very bad. Four coal barges of the Pennsylvania Railroad Co. were sunk at South Amboy two or three days ago, and two or three were sunk at Elizabethport and two or three near Yonkers."

Westchester Creek was frozen solid so that navigation was impossible, making it inaccessible for deliveries of coal to merchants along the stream, as was The Bronx Gas Co., which supplies a large portion of The Bronx with lighting and heating.

Pelham Bay and Eastchester Creek were impassable for coal boats, so there was serious danger of the Westchester Lighting Co. obtaining the necessary coal. This company supplies a portion of The Bronx and a large part of Westchester County with lighting and heating.

No data has been obtained from the United States Government as to damage done to its floating equipment, but it has been rumored that four marine chasers were sunk or badly damaged at the navy yard during the effort to break a channel in the ice.

FEBRUARY 1, 1918

Supplementing my statement of the 28th ultimo as to the damage to vessels in the harbor of New York occasioned by ice, season of 1917-18, an investigation has been made as to the character of the boat which would fill the requirement

of this port for ice-breaking, and in my opinion the most desirable craft would be a combined fire boat and ice breaker such as was built for the Copenhagen (Denmark) harbor board in 1916.

This vessel is very sturdy and powerful, has splendid accommodations for her crew, and is fitted for towing purposes, has a wireless outfit, powerful wrecking pumps and gear, searchlight, large bunker capacity and tanks, and is altogether a complete, modern, and excellent boat for the purpose intended. This boat makes longer trips and has heavier ice and more severe conditions generally to deal with than a boat of this character would be called on to negotiate in this vicinity, and for this reason and in view of the fact that probably the major portion of her duties will be as a fire boat around congested slips where handiness is a prime necessity it is suggested that the dimensions of the Copenhagen boat be modified to suit our conditions, and I am giving below suggested dimensions of proposed boat as compared with the aforesaid boat, viz:

Danish.

Length on deck.....	147 feet.
Breadth, molded.....	37 feet 6 inches.
Engine.....	<u>22 by 35 by 58½ inches</u>
	36 inches
Horsepower.....	2,000 indicated horsepower.
Boilers (3).....	13 feet 3 inches diameter; 11 feet 6 inches long.
Boilers, pressure.....	200 pounds.
Propeller.....	Nickel steel, 12 feet 9 inches diameter.

Proposed.

Length on deck.....	135 feet.
Breadth, molded.....	31 feet.
Engine.....	<u>19½ by 31 by 52 inches</u>
	32 inches
Horsepower.....	1,500 indicated horsepower.
Boilers (3).....	B. & W. watertubes.
Boilers, pressure.....	180 pounds.
Propeller.....	Nickel steel, 11 feet diameter.

Fire pumps, as decided.

Wrecking pumps, as decided.

All other details, as decided.

The modern and accepted way to break heavy ice is to apparently run up on it. This is accomplished by designing the boat with a cut-away or sleigh-runner bow and sinking her by the stern by pumping salt water in a large stern compartment and at the same time emptying the bow tanks so as to lighten the forward end of vessel as much as possible. A vessel built and trimmed in this manner makes use of her weight as well as her power in breaking ice, and, furthermore, she can never become jammed in the ice, as so frequently happens to straight-stem, deep-bowed vessels.

THE CHAIRMAN. You may file that with the clerk before you leave.

Mr. HULBERT. There is a sum of money for the removal of driftwood from the waters of New York Harbor. If it is necessary to take driftwood out of the harbor in other seasons of the year, as an improvement to navigation, it seems to me that it is equally the duty of the Government to maintain an open channel in the navigable waters of New York Harbor at those seasons of the year when they are blocked by ice.

Mr. DEMPSEY. What do you call that operation?

Mr. HULBERT. It might be likened to what you call it when you take boughs out of the river.

Mr. BOOHER. Snagging.

Mr. HULBERT. Snagging, yes.

You will find a unanimity among steamboat and tugboat men in New York City for this bill.

Mr. BOOHER. Have you any of those ice boats now?

Mr. HULBERT. We have not. We are using ordinary tugs, which are not suited for that purpose, because they sit down in the water at the nose and run flush into the ice cake; there are boats built especially for this work. Take the *Florizel*. We paid \$100 an hour for her while she was in port. That is a vessel built for the purpose and it runs along with a high nose and presses the ice down and that way breaks it up. That is the method used on the Great Lakes.

Mr. SNELL. And they use them in Alaska.

Mr. HULBERT. Yes; and at other places like Newfoundland and other places of that kind. This bill has been introduced by Rep. Thomas Smith of New York, at the suggestion of my department, and I would like very much to have the consideration of this question taken up by the committee, and if it deems it proper to do so, to include in the rivers and harbors bill in the same way you include the dredging and wharves proposition, to remove impediments to navigation from the channels of New York Harbor and elsewhere.

I believe that is about all I care to say about these matters. I do not want to take up too much time, because there are a number of other gentlemen here who wish to speak and whom I desire the committee to hear.

The first one I will introduce is former Supreme Court Justice Charles F. MacLean, of New York, who is particularly familiar with the Harlem River and with Harlem or Bronx Kills, but who has made a deep study of water-way conditions in New York, and who has also presented a great deal of legislation which is now on Federal and State statutes in regard to water-way questions.

STATEMENT OF HON. CHARLES F. MacLEAN, FORMER JUSTICE OF THE SUPREME COURT, NEW YORK CITY, N. Y.

Mr. MacLEAN. Mr. Chairman and gentlemen, the improvement of the Harlem River seems to be predicated upon the elimination of the Johnson Iron Works bend and on the modification or the elimination of the piers of High Bridge. If there is to be a hearing on this subject, as is anticipated by Mr. Hulbert, in New York on the Harlem River improvement, then it is not expedient to occupy the time of the committee with an extended discussion of that subject. It happened that I drew the legislation adopted both by the State of New York and by Congress in respect to the improvement of the Harlem River. The statute of the State of New York in that behalf provides for affording the right of way suggested or demanded by the Engineering Department of the United States by anticipating something to be received from the abandonment and cession of the present channel. The State of New York was to issue and sell its certificates up to \$1,000,000. It is erroneous to say that that has relation to the constitutional limit of the State of New York. It has practically been decided in a case in New York that the scheme or plan is constitutional.

I am of the opinion, also, that the condemnation proceedings must be had under our general law to obtain possession and ownership of the Johnson Iron Works property, without putting the canal improvement to the hazard of criminal prosecution, as seems to be

union in Albany, mayhap for the reason that the law department of the State in Albany and the engineering department have been occupied with the condemnation of property for the Barge Canal under the administration of the Barge Canal under the special act. The provision for the condemnation of that property is in our general condemnation law, which provides for the abandonment of the proceedings if it turns out that the price will be too much. Like the old law of Lord Maule, who said that an action is like lighting a candle—you can blow it out when you want to.

As to the improvement of Harlem River and East River, it seems to be a very important improvement to the whole country for this reason, among many others, that the improvement of the Harlem River would benefit all the States littoral to the Great Lakes, which have 58 ports—57 besides Chicago—and handle in the way of tonnage about 220,000,000 per annum; with the opening of the Barge Canal through the State of New York it would supply the one wanting link between the Hudson River and the Sound, about 8 miles, at a cost of little over a couple of millions, providing a waterway which our engineers have had in contemplation and have spent a great deal of time and money in making out calculations and reports for many years.

That will make a waterway for transportation from ports on the Great Lakes, through the Barge Canal, to the Sound and to New England. It will greatly benefit 15 States, the great industrial States of the Union, from which come 75 per cent of all the revenue of this Union; the other 33 States contributing on an average less than seventy-six one-hundredths of 1 per cent apiece. The importance of the port of New York to this Union is not within ordinary calculation. The opening of the Erie Canal on October 26, 1825, made the Erie Canal a national asset. It was the opening of a natural waterway, which had been used time out of mind, and which was a complete waterway from the Hudson to the extremest limit on Lake Superior, saving portages of 30 odd miles—16 miles at Schenectady, 6 miles at Little Falls, and 3 miles of the connection at Wood Lake, between Oneida Lake and Oneida River, running into Lake Ontario, and the long carry around Niagara.

It is a digression, but it is notable that it was of this very channel that George Washington wrote in his notable letter to Marquis de Madaeleus and of which he spoke before the legislatures of Maryland and of Virginia after he made his trip over that country.

Now, there is no other waterway between the Atlantic and the Great Lakes, which can be brought into competition with it, and everything that is done to promote that waterway increases not only the prosperity, but the convenience and the commerce of these great States upon which the whole country depends for its development and improvement. It is true that this greatly advantages the city of New York. It has made the city of New York the great manufacturing place of the Union, for we manufacture in New York City one-tenth of all the manufactures of the United States.

The CHAIRMAN. In quantity or value?

Mr. MACLEAN. Both. New York City incidentally is the one place in the United States which produces a substantial revenue for the Postal Department. Year before last it contributed a net profit of

over \$19,000,000—about 3 per cent of the revenue. New York and State produce 39.76 per cent—practically 40 per cent—of all revenue of the United States; so it must be good business to do a thing that will facilitate that commerce.

Respecting the improvement of the East River, that is also of singular importance to the United States. The naval appropriation bill adopted year before last contained in it an authorization, and in direction in effect, that the Secretary of War and the Secretary of the Navy should recommend a plan for improving certain harbors on our seaboard for defensive purposes. That was submitted to a joint board composed of our highest naval officers and Army engineers. As to the port of New York the joint board bespoke a channel through the East River of 35 feet, with a recommendation of 40 feet, as a war measure.

Under the terms of the naval appropriation bill, that channel was to be completed within five years, and as much sooner as achievable. This appears in Senate Document No. 3, and the identical House Document No. 140 of the last Congress, in which that recommendation is set forth, a recommendation approved not only by the joint board of the Army and Navy as a war measure, but also by the Secretary of the Navy and the Secretary of War and by the President himself, so that we have an authoritative approval of such a channel through the East River. The importance of it commercially is great; the importance of it as a war measure is very much greater. In the conditions now existing, capital ships can be gotten into and out of the navy yard at New York only at certain tides, and, of course, at certain hours. In October of the year before last we had seven capital ships in the New York Navy Yard. They could be gotten out during only about two hours a day. The naval commander was unable to get out the chief ship himself, and had to get Capt. Dalzell to take out with his tugs. A couple of sticks of dynamite would have dropped the Brooklyn Bridge and have rendered it impossible to get the ships out to sea for a long time, because they could not get through Hell Gate. No vessels, save one, of the fleet have gotten through Hell Gate since Decatur's time, and his adventure was hazardous ever again to be ventured. The channel in the upper bay is at points, as just above Robins Reef, only 324 feet wide. It could be stopped up for weeks by the sinking of ships loaded with heavy materials and explosives.

Commercial bodies in New York, and also members of the Government, are in favor of the bill, which will make a through channel from Sandy Hook to the Sound. According to distinguished engineers, most of that would be achievable, if money were provided within three years and the whole within five. That certainly would be a great war measure. Competent authorities declare that a way from Sandy Hook to the Sound would be for defensive purposes very much superior to the Kiel Canal. It would provide a channel in parts of the way 900 feet wide, and in only two places would there be any very substantial diminution to 400 feet. That channel would be admirable throughout for operations of the fleet. You will remember that the Kiel Canal, which is the manifest example at present time, has only seven turnouts in its 61 miles, and is obstructed by locks at the ends. This project—for a feasible channel for capital

ssels of war from Sandy Hook to the Sound—has been before our
 ineers for many years. In 1853 Maj. Fraser, in his report to the
 etary of War, Mr. Jefferson Davis, pointed out the great impor-
 ce of that channel, how vitally important it might be, not only to
 city and State of New York, but to the whole Nation. That has
 n repeated from time to time by distinguished men, among whom
 Admiral Dewey and Col. Black and almost all the officers who
 ned in the recommendation pursuant to the naval appropriation
 of 1916, and by the Secretary of War, the Secretary of the Navy,
 d the President himself.

The bill introduced by my distinguished friend, Mr. Riordan,
 October, has the approval of commercial bodies and others in
 w York. It provides for the completion of that channel, as indi-
 ed in the recommendation pursuant to the naval appropriation
 of 1916, and by the Secretary of War, the Secretary of the Navy,
 d the President himself.

The bill introduced by my distinguished friend, Mr. Riordan,
 October, has the approval of commercial bodies and others in
 w York. It provides for the completion of that channel, as indi-
 ed in the recommendation pursuant to the naval appropriation
 of 1916, and by the Secretary of War, the Secretary of the Navy,
 d the President himself.

The project therefor adopted in the statute for improvement of
 ers and harbors in the last Congress will, however, benefit the
 y of New York relatively little. It fails to provide accessibility
 the piers on each side of the East River. Mr. Riordan's bill
 vides for such accessibility, as recommended by the present Chief
 Engineers when he was the district officer in New York, and
 t the City of New York shall pay for such accessibility up to
 0,000,000.

It is not to be gainsaid that feasible improvement of the East River,
 adequate for operations of the fleet, is, as the far-sighted Maj. Fraser
 te Mr. Secretary Davis threescore and five years ago, a matter
 very first importance, not to New York alone but to the whole
 tion.

The matter of very first importance to the whole Nation may not
 left to functionaries to be taught in the dear school of experience.
 The matter of very first importance, not to New York alone but to
 whole Nation, is a practical problem for practical persons.

The project to connect the North Sea and the Baltic was two cen-
 ies ancient before stout Nunez, silent upon a peak in Darien,
 red at the Pacific with a wild surmise. Wallenstein cherished
 design in 1626 in a scheme to destroy the naval power of the
 ndinavian Kingdom, the Netherlands and England.

The duke's advisers pronounced it impossible. Other military men
 the like for succeeding decades and decades.

As late as toward the end of the seventies royal experts, after new
 dies, pronounced the undertaking impracticable. In 1878 Herr
 alström, a Hamburg shipowner, asked and got imperial permis-
 to work out a plan. This, assisted by Naval Inspector Boden,
 completed and handed over to the Government in 1881. Under
 s, a ship merchant's plan, adapted by Privy Councilor of Engi-
 rs, Baensch, between 1887 and 1895, the canal, 61 miles in length,
 constructed from the Elbe to the Northern Harbor, at a cost of
 879,000 marks, of which Berlin contributed 50,000,000 marks.
 ving interest temporarily.

Of this channel it was boasted:

The advantage of the canal for navigation is very important. Aside from greater safety than by way of the boisterous Skaggar Rack, illy notorious for its many shipwrecks, it is above all of shorter distance to all ports on the English coast south of Newcastle. * * * Also its military importance is not small. The canal makes possible transfer of the entire fleet, unperceived by the enemy, and, in brief, while from the North Sea into the Baltic and from the Baltic into the North Sea, as need be. In fact, the German Navy can pass in 16 hours from Kiel through the canal to the Bight of Heligoland, thence to join the squadron sailing from Wilhelmshaven.

Reconstruction of the canal, increasing its width at bottom from 72 to 140 feet, its breadth at the surface from 213 to 330 feet and its depth from 29½ to 36 feet, was begun in 1908 and completed, at a cost of 224,500,000 marks.

So soon as reconstructed, it was reopened with imperial pomp, June 24, 1914. The tragedy at Sarajevo came June 28, 1914. Serbia received the Austrian démarche July 23, 1914. War was declared August 1, 1914. Belgium was invaded August 3, 1914. Then cried Havoc! and were loosed afield the dogs of war.

The matter of very first importance to the whole Nation is a practical problem for practical persons.

Surely the practical persons of this committee, of the Congress and of the country, may deem it worth while betimes adequately to improve these two waterways, the short estuary between the Hudson and the Sound and the great tidal strait from the Sound to Sandy Hook, in furtherance of the commerce which vastly advantages our national progress and prosperity, and to forefend, from beyond such ruthless attacks to subvert our comfort, our peace and our honor.

The CHAIRMAN. That is a fine statement, very clearly and forcefully presented.

Mr. HULBERT. These gentlemen were put to a great deal of inconvenience in coming here, because of the railroad conditions, which are very bad. We have now in New York a very acute situation to meet; it is very pressing and it affects every line of activity. For this reason it is important that it be considered fully and without delay.

The next gentleman I will call is the engineer and surveyor under whose direction and supervision the State Barge Canal is nearing completion, Frank M. Williams, of Albany.

The CHAIRMAN. We shall be very glad to hear from Mr. Williams.

STATEMENT OF HON. FRANK M. WILLIAMS, STATE ENGINEER AND SURVEYOR, ALBANY, N. Y.

Mr. WILLIAMS. I wish to take up only a moment of your time. I shall not attempt to amplify the presentation of these projects which has been so ably made by Judge MacLean and Mr. Hulbert, except in one particular. I want to put the State of New York on record as being heartily in favor of these projects as advanced by the previous speakers. The port of New York is the only seaport of the State of New York has. The congestion of that port, on account of the lack of facilities in caring for the traffic that enters that port from all parts of the country, is very great. That is the reason the State and city officials urge the careful consideration of these projects. As to the one particular point in which I wish to amplify

the remarks of Mr. Hulbert I will say this, that the State of New York has, as you know, for some years past been engaged in the construction of a barge canal. That Barge Canal usually is interpreted as meaning a canal running from Lake Erie to the Hudson River. In reality there are four canals in the State of New York, the improvement of which have been carried on simultaneously. The Champlain section of the Barge Canal has no connection with the Erie, except where it reaches the Erie; that canal is completed, and, therefore, affords full connection between the northern country and the seaboard. The Oswego Canal is also completed—a barge canal. That canal connects Lake Ontario by means of a junction with the Erie Canal, and that connects it with the Hudson River. The main line of the Erie Canal is the one usually regarded as the barge canal, because that is by far the most important. It will be open for navigation next spring—I feel no doubt on that point—unless some unforeseen occurrences arise, such as depriving our contractors of coal or the necessary material to do the remainder of the work.

The barge canal has four main termini—one on the Niagara River at Tonawanda, near Buffalo; one at Oswego; one on Lake Champlain; and the other on the Hudson River. It has been urged for some years that there be provided facilities at these termini, which will permit 12-foot navigation, so that the canal barges can get out of these waters that are under your control and over which waters we have claimed no jurisdiction. You have listened favorably to some of these projects. Some of them have been carried out in part, and for some others there have been provisions made which will insure their carrying out. In the case of the port of Oswego, the work was stopped on three or four occasions, until we could get the rock channel there, at the junction of Lake Champlain; and we have carried in the appropriation bill the amount which will be utilized to start that work and, I think, complete it.

MR. DEMPSEY. Has that work on Lake Champlain been started, Col. Newcomer?

COL. NEWCOMER. The work has not yet begun. The plans are being prepared with an idea of starting it in the spring.

MR. WILLIAMS. The money is available just as soon as the work can be begun.

COL. NEWCOMER. Oh, yes. We have a substantial appropriation, which is to be supplemented by another appropriation in the forthcoming bill.

MR. WILLIAMS. One project undertaken by the State of New York has provided for the construction of terminals, which will consist of the necessary piers, docks, freight sheds, etc., with the machinery that is necessary to handle the freight; and quite a substantial appropriation is made to carry that into effect, amounting to something over \$9,000,000.

Chapter 746 of the Laws of 1911, known as the terminal law, provided in some cases for the location of those terminals by defining where they should be located, and among other locations is one defined as the Borough of the Bronx, at East One hundred and Thirty-sixth Street. Now, a commission did outline a report upon which this law was based, and which commission recommended most of these locations. They recommended one at the Bronx, but placed upon that a

condition, and it is the only conditional terminal in the city of New York that appears in the law. Apparently the commission felt that the uncertainty of the time when the Federal Government might improve the Bronx Kills made it undesirable to permit the State to complete the work until this other work should be done. There is another provision that I would like to mention, providing for the construction, at the foot of East One hundred and Thirty-sixth Street, in the borough of the Bronx, a pier 60 feet wide. We are now charged with carrying out the provisions of this act with an expenditure of more than \$9,000,000, in the city of New York. There are in progress most of the terminals which are laid down and provided for here. Most of the contracts have been let, and for the others plans have been prepared or are being prepared. I hesitate to permit the State to let such a contract as that here under consideration. That is the reason why I am appearing here at this time, to call your attention to this peculiar thing with which we are confronted, to this condition which we have before us, and to the necessity for remedying the situation. We want to know as soon as possible that you are going to undertake the Bronx Kills improvements.

Mr. DUPRÉ. When was that legislation enacted?

Mr. WILLIAMS. In 1911.

The CHAIRMAN. At what points has the State of New York authorized the construction of terminals, and what is their status as plans of construction or completion?

Mr. WILLIAMS. The city of New York?

The CHAIRMAN. No; the State of New York, in connection with the Erie Canal.

Mr. WILLIAMS. Beginning at the western end, there is a provision for two terminals in Buffalo, one at Erie Basin and one at the Old Erie Basin. There is a provision for a terminal at Tonawanda and two at Brockport, and there is a provision for terminals at many small towns, coming down to the east of Brockport—perhaps 20 of them. Then we get to the city of Brunswick, where there is a substantial terminal being provided. East of Rochester there are terminals at Palmyra, and then when we get to Syracuse, where there is a very substantial structure costing about \$1,500,000. Then on the Oswego Canal, which is, as I said, one of the four canals that have been constructed, we have two terminals, a lake terminal and a river terminal, both of which are in process of construction.

Mr. DEMPSEY. What is the cost of the Oswego terminal?

Mr. WILLIAMS. About \$1,400,000.

Mr. DEMPSEY. Then, how much did you spend in excavating the entrance to the lake?

Mr. WILLIAMS. About \$60,000.

Mr. GALLAGHER. What lake?

Mr. WILLIAMS. Lake Ontario.

That money is expended in cutting a channel so that we will have 12 feet of water in the harbor.

Then, still in answer to your question, Mr. Chairman, we have two small terminals on Oneida Lake, one at Rome, and one at Utica, and on the canalized part of the river and at several places, some of which I have mentioned, including Schenectady, Brockport, Troy and Albany. Then there are the terminals on the Champlain Canal.

The CHAIRMAN. Where are the terminals on the Champlain Canal?

Mr. WILLIAMS. At Whiteboro, Fort Edward, Mechanicsville, Waterford, Fort Hunter, Plattsburg. Those three latter are on Lake Champlain and were constructed as a part of the Champlain terminal system. Then coming down to New York City, we have, as I have said, the terminals provided for in that city.

Mr. SWITZER. How many terminals are there?

Mr. WILLIAMS. Work is in progress on 13 and plans are progressing for three more. There are two of those locations which will require an agreement on the part of the State of New York and the city of New York, acting through the Commissioner of Docks and Ferries.

Mr. DUPRÉ. They are being constructed at the expense of the State?

Mr. WILLIAMS. Yes, sir; some are not yet complete.

Mr. DEMPSEY. What is the total appropriation?

Mr. WILLIAMS. \$19,800,000.

The CHAIRMAN. What is your official position?

Mr. WILLIAMS. State Engineer and Surveyor.

Mr. DEMPSEY. What is the expense of the construction of the barge canal?

Mr. WILLIAMS. The expense of the barge canal and the terminals, as provided for so far by appropriation, is \$154,800,000.

The CHAIRMAN. Have you a map that will be available in connection with the barge canal and also showing the locations of the terminals, with any printed description of those terminals?

Mr. WILLIAMS. We have maps, Mr. Chairman, showing the exact location of each one of those terminals.

The CHAIRMAN. If they are available I will be glad to have them.

Mr. WILLIAMS. I shall be glad to send you one or any number you may care to have.

Mr. GRAY. These are constructed by the State solely, these terminals?

Mr. WILLIAMS. Yes, sir. The municipalities have nothing to do with them except in one or two places, where they have provided a part of the right of way.

Mr. Chairman, do you think that you will want anything else in the way of maps, except that one showing the location of the canal terminals?

The CHAIRMAN. That is all that occurs to me at the moment, but if you have others that will be valuable in illustrating the work there, we will be very glad to have them.

Mr. DUPRÉ. I see here a history of the State Barge Canal. It is very interesting. Was that issued by your department? Is that official?

Mr. WILLIAMS. That is not our publication. We have issued several. Perhaps that is the one published by the superintendent of public works. The situation in New York with reference to the canal is that they have the engineer's department and superintendent of public works; so they have the two departments. He has also gotten out some very interesting publications, and I will send some down to you.

The CHAIRMAN. We shall be very glad to have them.

Mr. HULBERT. There is also here with us, as a member of delegation, a gentleman who was born in the Bronx, served as borough president, had very much to do with the development of that community, which 35 or 40 years ago had a population of 35,000, and now has a population of 750,000; and yet it is without any substantial water terminal, although it fronts on the Hudson River, the East River, and upon the Harlem River, and Long Island Sound. I introduce the consulting engineer of the Borough of the Bronx, Mr. Louis F. Haffen.

The CHAIRMAN. We shall be very glad to hear from Mr. Haffen.

**STATEMENT OF MR. LOUIS F. HAFFEN, CONSULTING ENGINEER,
BOROUGH OF THE BRONX, NEW YORK CITY, N. Y.**

Mr. HAFFEN. Mr. Chairman and gentlemen of the committee. I am here in the interest of the municipality of New York and the State of New York, which, as Judge MacLean has told you, provides 40 per cent of the total revenues of this country. The City of New York pays 70 per cent of the taxes, as is generally reported—

Mr. WILLIAMS (interposing). The City of New York pays 70 per cent of the taxes?

Mr. DEMPSEY. In regard to the canal, you had better state whether the municipality or the State takes care of that.

Mr. HAFFEN. The State does it, but 70 per cent of the money comes from the City of New York.

In order to be brief, Mr. Chairman and gentlemen, I will not undertake to go over the subject again. It has been gone over very thoroughly. I will refer to the situation and the remedy proposed at the bend at the Johnson Iron Works, the High Bridge, and the Bronx Kills. The stream up there at Spuyten Duyvil is navigable at the present time. Down at the other end it is navigable, but the main obstruction is at High Bridge. I think the engineers of the Department have authority to order the removal of this bridge and the piers thereof. The removal of said piers is absolutely necessary for navigation. The bridge was built originally between the years 1842 and 1848, for the passage of water. Both ends of it have no direct connection whatever to-day with the highways for vehicles. To-day the vicinity of High Bridge has a few Italian residences. The village was a lively place some 30 years ago, but at present both the village and bridge are things of the past. These piers being removed, the stream could be dredged to a proper depth and width for the use of navigation. I believe that is the first thing that should be done. It was said by a representative of the City of New York that the board of estimate and apportionment was going to wait until the government at Albany and the Government at Washington had completed the removal of the obstructions at both ends before removing the piers at High Bridge. I should judge that the City of New York should act first, and that the Government at Washington should order the removal of these piers at High Bridge, which would make the stream navigable. They have the power to order the removal of these piers, and that would stop all this uncertainty that has been referred to by Commissioner Hulbert, and it would put an end to

question of sentiment that might be brought before us when the hearing is had upon that subject at New York. There is sentiment there.

Gentlemen, these piers at High Bridge should be removed and then the Government should take up the question of the dredging of the Bronx Kills. That same should be attended to immediately. The Government has absolute power there. As to this bend at Spuyten Duyvil, that can be taken care of very easily. I will say a word in connection with that. The proposition of the Government, as I understand it, would destroy the Johnson Foundry for the present. We all know, and especially those of the Army know very well, that the Johnson people are manufacturing shells for the Government, and that that branch of the Government is not going to allow the destruction of the Johnson Foundry while the war lasts.

We want speedy action in the removal of the piers of High Bridge and that some feasible plan be provided or adopted that will allow navigation through the Kills—Bronx Kills or Harlem Kills, as it is called, according as you live on one side or the other. I think the proper name is Bronx Kills, coming, of course, from Bronx myself. There is no doubt about the advantages that would accrue from that improvement. However, as I have said before, I think the first thing to be done is to order the removal of the obstruction at High Bridge; and the Government should act immediately, in cooperation with the city of New York; that is, the city of New York should be ordered to remove the obstruction, and then there would be no question of sentiment to be discussed at a hearing in New York later on.

Mr. BOOHER. What obstruction are you talking about?

Mr. HAFFEN. That at High Bridge. It has been said by a representative of the city government that they would not take any action in connection with the removal of the piers of High Bridge until the governments at Albany and at Washington had taken action at both ends of the stream previously.

Mr. HULBERT. Mr. Lewis said that that was taken by the board of estimates under the previous administration. That administration went out of office on the 31st of December.

Mr. HAFFEN. That is what I had reference to.

Mr. HULBERT. I want to make it plain that the present administration does not take that attitude.

Mr. HAFFEN. Yes. These piers should be removed, and then the city government of New York will know—

Mr. BOOHER (interposing). Is the city government asking the Federal Government to order that obstruction removed?

Mr. HULBERT. Let me answer that. I do not assume that it would be the duty of the city government to ask the Federal Government to order the city government to do something that the city government could do without it. I have started the machinery, but it requires the coordination of half a dozen different departments. I have said that if the War Department will give this order, that will expedite the activity of the several departments involved.

Mr. HAFFEN. If you had hearings on this subject in New York, you would have these various organizations appearing to urge the sentiment idea regarding High Bridge that has been spoken of here—that it is a historical monument, etc. It may be a historic monument, but it is useless otherwise.

The CHAIRMAN. The Board of Engineers have referred this report back to the district officer with instructions to give hearings?

Mr. HOFFEN. So I understand.

The CHAIRMAN. At that hearing presumably a stenographer will be present and take down the proceedings and transcribe it, so that the report will be available for use by the Chief of Engineers, or the Board of Engineers.

Mr. HOFFEN. Yes.

Mr. HULBERT. I will next introduce Mr. Olin J. Stephens, who is chairman of the committee on transportation of the Bronx Board of Trade.

The CHAIRMAN. We shall be very glad to hear from Mr. Stephens.

STATEMENT OF MR. OLIN J. STEPHENS, CHAIRMAN OF THE COMMITTEE ON TRANSPORTATION OF THE BRONX BOARD OF TRADE.

Mr. STEPHENS. Mr. Chairman and gentlemen of the committee, I think the matter has been gone over very thoroughly. I have a report of the hearing of January 13 before this committee, at which Congressman Norton was one of the speakers. Have any of the present members of this committee been to New York to look over the situation?

The CHAIRMAN. Not recently.

Mr. SWITZER. We were there in August, 1916.

Mr. STEPHENS. I will extend an invitation to this committee to come and look it over at the first opportunity.

The CHAIRMAN. Thank you.

Mr. STEPHENS. The population of New York was spoken of as being 5,000,000. It is now about 8,000,000. The Bronx is now growing along toward 800,000.

There is no question about the removal of the piers at Hell Gate Bridge. They should be removed, and if the War Department will hasten that, so much the better. We are working upon a proposition to change the plans at the Johnson Iron Works. These matters have been thoroughly gone over, and there is nothing I can suggest that would not be a duplication of what has already been said. I have been requested, though, to say a word about the tide-water canals. A bill has been introduced by Mr. Freeman—

The CHAIRMAN (interposing). Of Connecticut?

Mr. STEPHENS. Yes. We all know the burden that is now on the shoulders of the railroads, and the need of waterway cooperation all over the country. I believe the railroads have begun to realize that the low-grade, bulky freight must be carried by the waterways, and that every effort should be made by Congress to provide for such improvements as will make the waterways available for navigation; and I ask for favorable consideration by this committee of Mr. Freeman's bill. I have not the details of it, but, generally speaking, I am in favor of all waterway improvements. They are essential, especially at this time. The terminals are very much congested, and the railroads are congested, and there should be some relief provided; and all the relief that can be provided, should be provided.

I think that is all I have to say on the subject. I have a number of copies of a pamphlet here entitled "Bronx Waterways as Part of

State Barge Canals," an address delivered at the annual convention of the New York State Waterways Association, and held at Utica, N. Y., October 4 and 5, 1917, by J. W. F. Bennett, consulting engineer to the borough president of the Bronx. I will leave them with the committee.

The CHAIRMAN. We shall be very glad to have them.

Mr. DEMPSEY. Your idea is that the appropriations, instead of being made smaller during the war, should be increased because of war necessities?

Mr. STEPHENS. Absolutely; without a question.

Mr. DEMPSEY. Do you think that is the sentiment of the commercial bodies of the city of New York?

Mr. STEPHENS. As far as I know, it is.

The CHAIRMAN. Just this thought, Mr. Stephens: The chairman of this committee has received a number of letters from some gentlemen in Brooklyn and other sections of New York regarding the restoration of the Delaware and Hudson Canal, and I have substantially replied to each by commending their interest in it and stating to them that for various reasons canals had been disparaged in the public mind for a number of years; that some of them had been destroyed by either the voluntary or indirect action of the railroads, and the public as a whole probably were not at this time alive to the necessity of rebuilding or reconstructing these canals, and that it was important for those who believe in them to institute an intelligent propaganda in order to overcome that handicap. I also stated to them that it would be a question as to where the obligation should lie for their restoration, whether with the United States or the States, or the municipalities or through cooperation. I make that statement in order that you may have the benefit of at least the individual views of the chairman. The chairman believes in the extension of waterways, but legislation regarding that, as with all other matters, must be in response to intelligent public sentiment.

Mr. STEPHENS. Most of these canals, as you know, have been owned by the railroads. The sentiment, as I stated before, has somewhat changed. Take the Delaware & Hudson Canal, for instance. The railroad company, for reasons best known to themselves, decided to discontinue that service, believing, I presume, that they could make more money by moving that coal by rail instead of by water.

The CHAIRMAN. I think the franchise was granted for the construction of the railroad along the banks.

Mr. STEPHENS. Yes.

Whether it should be by local associations or by State and national, I am not prepared to say at this time; but I feel that if it is possible for the Government to take that up, it is best for them to do so.

Mr. SWITZER. I am in full agreement with your idea for the improvement of our rivers and harbors, and I feel and have felt since I have been a member of this committee the last three or four years that we have practically appropriated everything that has been recommended by the engineers, and that has been the general feeling. I think, of the members of the present committee. We have a powerful agency in the City of New York that has heralded all over the country the information as they have interpreted it—and I refer to the press of New York—that of necessity everything we appropriated

outside of New York was "pork." I suppose they do that for the purpose of discrediting the Rivers and Harbors Committee of the House of Representatives.

Mr. STEPHENS. If the influence in favor of waterways was as strong as some other influences which bear upon our press in New York, the word "pork" would be eliminated altogether. We have tried to do it, but unfortunately most of us are not as large advertisers as others.

Mr. DUPRÉ. Isn't it true that the press of New York is not altogether representative of the views of New Yorkers?

Mr. STEPHENS. It is. I do not think the press as a whole feel that way as much now as they have formerly. I think the influence of the commercial organizations is increasing with the papers, and the influence is to avoid these remarks.

Mr. DEMPSEY. I saw in one of the great newspapers of the Empire State issued a week ago yesterday that we had added \$3,000,000 to the rivers and harbors bill beyond the amount that was originally contemplated, with some reference to "pork," which should be cut out in the interest of the public.

Mr. HULBERT. Mr. Hoover might help us out by ordering a "porkless" day.

I would like to call Mr. Edward J. Dolge, who represents the Harlem River Towing Line.

The CHAIRMAN. We shall be very glad to hear from Mr. Dolge.

Mr. HULBERT. He will be able to give some information concerning the necessity for appropriating for an ice breaker.

The CHAIRMAN. All right.

STATEMENT OF MR. EDWARD J. DOLGE, REPRESENTING THE HARLEM RIVER TOWING LINE, NEW YORK CITY, N. Y.

Mr. DOLGE. Mr. Chairman and gentlemen of the committee, I received notice of this public hearing only yesterday morning, and I am not prepared to make a long speech, expecting to be shown the report of the United States Army Engineers as to the proposed improvements, but I do want to say that I am heartily in favor of the first three points of the improvement in the Harlem River.

In regard to High Bridge, they do not need that bridge. It is my opinion that the removal of one or two piers of High Bridge should be ordered.

Then there is the project at Bronx Kills, which should have the consideration of this committee, as should also the bend at the Johnson Iron Works, but the first should have the thorough consideration of the towing interests of New York Harbor and a hearing should be had with the United States Engineers in New York City.

I have been connected with the towboat business for a good many years, engaged in the operation of towboats through the points I have spoken of, and from my experience I am in favor of widening and deepening the channel in the Harlem River, and this work should be done as quickly as possible as to the Bronx Kills widening as proposed. We will then have to depend actually upon the tide. We have to watch the tide, and if it is ebb tide we will be tied up, and we will often lose six hours there. There is a senti-

ment in New York in regard to this improvement, and we will do the best to have the shipping interests represented at the public hearing that is, I understand, to be given in New York on the subject.

Now in regard to the ice breaker.

Mr. GALLAGHER. You referred to the removal of one or two piers of High Bridge. Why not remove the whole bridge?

Mr. DOLGE. That could be done. It is the worst obstruction in the Harlem River. Everybody is scared of it.

Mr. SWITZER. Does the tide run through the Harlem River?

Mr. DOLGE. It comes from North River, backs through Spuyten Duyvil and goes down to One Hundred and Twenty-fifth Street and meets the East River tide, and goes through the Kills and meets again with the Sound tide, and vice versa.

Mr. HULBERT. That is the reason why it is said that the Harlem River runs in both directions.

Mr. DOLGE. Yes. These obstructions, and the lack of these improvements, cause us great hardships, and this bill would eliminate them. The Towboat Exchange, of which I am a member, indorses this.

Mr. GALLAGHER. Straightening out the bend there at the Johnson Iron Works, wouldn't that help relieve the situation as far as the tide is concerned?

Mr. DOLGE. There is one little space there where the tide can go in besides the two draws in the drawbridge itself, which should be widened and deepened. It is very hard there now to go in at high tide.

Mr. GALLAGHER. That drawbridge is a great obstruction to navigation, isn't it?

Mr. DOLGE. Yes; as to the ice breaker, the committee should consider the proposition thoroughly and approve same. We have had our tugs held up in Harlem River for days. During this present hard spell we were not able to navigate and could not move any coal boats owing to the ice. I also heartily approve of having those piers at Highbridge removed.

Mr. HULBERT. I will now call Mr. Reichert, of the Reichert Towing Line.

STATEMENT OF CAPT. J. C. REICHERT, REPRESENTING THE REICHERT TOWING LINE AND THE NEW YORK TOWBOAT EXCHANGE, NEW YORK CITY, N. Y.

Mr. REICHERT. Mr. Chairman, I don't know that I can add much to what has already been said here already.

I have had 17 years' experience in and about the harbor of New York. High Bridge is a very bad obstruction. I have had six towboats damaged very badly in going through there.

As Mr. Dolge was saying about the turn at Johnson foundry, that should be removed, and that bridge at Spuyten Duyvil. When you go in there, you must go in and let the tow fall up against the bridge, and unless you use a good deal of skill you will do a whole lot of damage to the boats. As far as the Bronx Kills is concerned, we are going to have a public hearing in New York.

As to the East River, I would like to say that within the last month a steamer called *Dimock* was sunk right in the middle of the East River. She is not the only ship sunk there. A large steamer from the Great Lakes was sunk above the Sunken Meadows, where she struck. There are rocks and shoals in the East River that should be removed to let the ships go through, going up and down there. They are dangerous. The Government has taken most of our good pilots away from us, and we have to depend on new men for pilots. We are training boys nineteen years old, and putting them into the service on these boats to navigate through these dangerous places, under bad conditions. They have schools turning out pilots and engineers in three or four months. It can not be done. You can not make a practical man in that time. It takes experience. I am in the towboat business now, having seven tugs. Two of them have been frozen in since around the 27th of December, and they are there yet.

Mr. DEMPSEY. What would that mean a day if they were in operation?

Mr. REICHERT. Two hundred dollars a day.

Mr. GALLAGHER. Do you know of any places where the United States provides an ice breaker to keep navigation open?

Mr. REICHERT. I do not.

Mr. HULBERT. The United States Government made an appropriation—for which information I am indebted to Judge MacLean—in 1852 for an ice breaker for Staten Island.

Mr. GALLAGHER. It never provided it.

Mr. HULBERT. Oh, I think it did.

Mr. GALLAGHER. That was when Vanderbilt was in business around there.

Mr. REICHERT. There was one ferryboat chartered by the United States Army frozen in there Friday a week ago. I sent two tugs to the Cartaret Ferry to assist. They went down there and got this ferry out. Two ferryboats were broken down at Governors Island, so we had to go down there. After 24 hours' struggling with her, they got the ferry up at 4 p. m., and at 5 o'clock she lay at the bottom of the East River. I have three boats with broken propellers. It is safe to say that 65 per cent of all the towboats in New York City are crippled, and those that are running have pieces out of their propellers. I would say that 95 per cent of them are in a crippled condition, caused by the ice.

If the Government should build an ice breaker I would suggest that they consult men who know what the requirements are, so that the boat would be available for the purpose.

Mr. GALLAGHER. I think an ice breaker was provided by the navigation interests on the Great Lakes. Why can't that be done in New York?

Mr. REICHERT. Well, the navigation interests on the Great Lakes, as I understand it, are all one concern. There is no competition. It would be a pretty hard thing to get them together in New York on such a proposition, for we have there something like seven hundred and fifty-odd tugboats. It would be a hard thing to get them to contribute. You would have a hard time getting it.

Mr. HULBERT. This would be for the benefit of the Government as well as for the private interests.

Mr. REICHERT. Certainly it would benefit the Government. In the Great Lakes you have to transfer your freight to get it to the seaboard. Here we are loading it at the seaboard. We are handling coal for the ships and every kind of commodity that goes to France and the allies on the other side, and to our own armies over there. By having the tugboats tied up you are losing time in getting that freight handled. The tugboat is a very necessary article in keeping the freight moving. It is doubly important just now. A remedy should be sought for this condition, and a factor in it is the provision for an ice breaker, because that will aid in keeping the towboats available for moving the freight in seasons like this.

That is all I have to say.

The CHAIRMAN. Have you any idea what an ice breaker would cost?

Mr. REICHERT. Just now; no. If we ever get down to hard pan or down to a normal basis, you could probably build one for \$100,000. Now you could not build one for \$250,000.

Mr. LEE. What is the method followed now to try to combat the ice in New York Harbor?

Mr. REICHERT. We take out tugboats and run into it and break it up, but mostly the tug is broken up.

Mr. LEE. The companies working for themselves.

Mr. GALLINGER. How about fire boats?

Mr. HULBERT. You would not dare to take a chance with a fire boat. It might be put out of commission and could not be used to take care of a fire along the docks if it was used for that purpose.

Mr. GALLINGER. They do use them on the lakes.

Mr. REICHERT. They are built for that. The difference in the lakes and New York Harbor is this: They expect it, while we do not expect it in the harbor of New York. In the last seven years, in fact since 1907, we have not had any ice, nothing compared with this, and what we did have was probably for two or three weeks only. We are bound to get some ice every year, but it don't amount to anything usually. To meet that emergency we ought to have an ice breaker. In the summer time it can be used for picking up driftwood which breaks propeller wheels and shafts. The damage that is done in that way would more than pay for two ice breakers.

Mr. HULBERT. I will now present Capt. William J. Murray, and then I have only one other speaker after that.

STATEMENT OF CAPT. WILLIAM J. MURRAY.

Mr. MURRAY. Mr. Chairman and gentlemen, the ground with regard to the improvement of the Harlem River has been very well covered, and I am heartily in favor of all of the recommendations. I want to speak particularly about deepening of the Bronx Kills and the ice-breaking steamer for the port of New York.

With regard to the Bronx Kills I might say from practical experience as a licensed pilot that at the present time in order to get from the proposed terminal to a point directly opposite into the East River it takes a tow from one hour to three hours, whereas, if this waterway were opened they could go in from 10 to 25 minutes.

With regard to the tide that the gentleman on my left speaks about, and the hindrance to navigation in the Harlem River, I differ for this reason, that in pointing out a six-hour delay in the Harlem River you might as well point out a six-hour delay in the East River. No one attempts to take a tow in the East River against the tide, which varies from 4 to 7 miles an hour, depending upon conditions. Therefore, I say if the Bronx Kills were opened and the northwest end of Randalls Island cut off so as to bring that tide around, it would be easier to get into East River. I think the reference to these delays is for this reason, that at the present time the boats operating in the little creeks and rivers are small boats with little power. The conditions adjacent to New York are so bad that the day is coming, and that within a short time, when we will have boats of twice the power of our present boats in order to carry freight through this proposed improvement into the improvements that are bound to come. The improvements in the Harlem River at High Bridge and at Johnson's Foundry, are necessary articles.

At the present time if there is the slightest mismanagement on the part of the pilot, even with a light boat, it will strike one of these sharp corners, and it might as well run into a mountain. The improvement at Johnson foundry could not be done at this time. I believe, but this should not hold up the improvement to Bronx Kills. I understand it, that is one of the improvements recommended in the Army engineer's report, that unless the city does this work that they will improve Bronx Kills.

With regard to the ice breaker, the port of New York was frozen over this year, I suppose, as bad as it ever was before, and there is no telling what will be necessary in the future. Our principal coal ports are in Port Reading, Elizabeth, and Perth Amboy, coming through Staten Island Sound. That is a narrow channel and freezes over very quickly. In order to move that coal the companies have been paying \$500 and \$600 per day for towboats, unsuccessfully, and the city of New York is destitute for the want of coal. Poor people stand in line for miles with bags on their backs—women and children—waiting for coal. Their houses would not be without coal if the city of New York had an ice breaker. The island containing the United States hospital is frozen in, and the only way they can get to them is to try to break through with tugboats and to walk the rest of the way. Ellis Island, Blackwells Island, Wards Island, with its asylum for the insane, North Brother Island for contagious diseases, and Heart Island for prisoners and the burial of the city dead, are entirely cut off, with no means of transportation, on account of this ice. Last Saturday night the steamer provided by the city of New York to carry the dead to Heart Island had on it 400 bodies, an accumulation of some three weeks, which could not get through before on account of the ice. Just think of the disease that is spread by such conditions. That boat went to Heart Island and got stuck in the ice, and I, myself, got a boat and went up there and cut her out, working until Sunday morning at 6 o'clock to get her out of there.

Those are the conditions that make the need of an ice breaker at the port of New York absolutely imperative. At the present time from Old Ferry Point; which is a few miles east of Hell Gate and near the head of the Sound, to a point near Cold Spring Harbor it is frozen over; where it is not solid ice, it is slush and soft ice packed together, and the biggest sound steamers have difficulty in getting through.

I do not care to take more of your time. I hope you will work out a system by which you will clear up the situation in the Bronx Kills and also the proposition of an ice breaker, within a few months. That is a Government proposition. It can be built right away. In answer to the gentleman that suggests that it be done by private interests, I would say that the same rule applies to lighthouses and buoys. It is a navigation project and should be done by the Government. The same rule applies to an ice breaker as to a lighthouse and I hope that this committee—I am not familiar with the workings and do not know how you will do it—but I hope that this committee will give us this improvement.

MR. HULBERT. We have heard from representatives of the commercial organizations on the east side of the Harlem River and I desire to introduce Mr. Oscar C. Thees, of the Harlem Board of Commerce on the west side of the river.

STATEMENT OF MR. OSCAR D. THEES, OF THE HARLEM BOARD OF COMMERCE.

MR. THEES. Mr. Chairman and gentlemen, I will simply emphasize and back up Mr. Murray's remarks about the necessity for opening up the Bronx Kills or Little Hell Gate. Either would answer the same purpose. One or the other is necessary in order to get the smaller shipping out of the way and the big shipping that goes through Hell Gate and which is hampered there by the currents and eddies of the tides going through Hell Gate. These tides make the water there very dangerous, and by making a pass through Bronx Kills or Little Hell Gate you would get the smaller shipping out of the way of the big shipping. As far as the danger of its forming dangerous currents there is concerned, I think they would be offset by the minimizing of the dangerous currents in Hell Gate. Gen. Black, who has made a survey there, says that the currents in Hell Gate will be cut down 2 miles an hour by opening up Little Hell Gate and Bronx Kills. The reason the waters come in so strongly is because of the basin that has to be filled between high and low water. That is the only water that goes in through at Throg's Neck and Hell Gate, and every extra opening that is made for that water going in and out of this basin slows up the current in Hell Gate just that much. There is very little influence on that part of Long Island Sound and every extra opening that you make to let the water into the East River without having to go through Hell Gate will help the water in Hell Gate and I do not believe the tides would be dangerous that would be found in East River. It is like water going out of a hose. It gets more force when you put on the nozzle. I would be safe in saying that the tide on the one side or the other of High Bridge is at least 6 or 8 inches high on the tide side. You take those

piers out and that water would be practically level. The channel is so obstructed by these piers that the water rushes through there. If the channel was open, the whole body of water would be moved through very quietly.

I would like to call your attention to a fact that was brought out here and to emphasize it a little bit to your attention: That New York has spent \$150,000,000 for what is practically a national waterway. The New York Barge Canal is more a national waterway than it is a New York institution, and when it comes time to appropriate money for New York improvements, I wish you would bear that in mind.

Mr. HULBERT. We are going to try to conclude now and I want to introduce Mr. John A. Wilbur, former secretary of the Harlem Board of Commerce.

STATEMENT OF MR. JOHN A. WILBUR, FORMER SECRETARY OF THE HARLEM BOARD OF COMMERCE.

Mr. WILBUR. I can not add much to what has already been said. The correspondence relating to the matter I submitted from the Harlem Board of Commerce to Maj. Adams, in November and December, 1917, and it is a matter of record. However, there is one thought that comes to me that I have not heard spoken of this afternoon, and that is that this is in the nature of a war measure. It seems to me that if the Kills were opened so there would be proper navigation through the Harlem River into the Hudson River, it might be a very important war measure in case something should happen to some of the many bridges across the East River that would stop navigation. Between the Battery and Hell Gate if any of these bridges were destroyed so navigation would be stopped, some of the smaller war craft and much commercial shipping could pass through the Kills and Harlem River into the Hudson River and down the bay. That seems like an important precautionary measure and it is the only thought that I wanted to emphasize, as it seems to have been overlooked.

Mr. GALLAGHER. Representative Dale, of New York, would like to be heard.

Mr. HULBERT. I first want to submit to the committee a letter which I have received from Admiral Usher, and ask that it be printed.

(The letter is as follows:)

UNITED STATES NAVY YARD,
New York, N. Y., January 22, 1918.

MY DEAR COMMISSIONER HULBERT: I have received your letter of yesterday with much pleasure, informing me of your effort in behalf of an ice-breaking vessel for New York Harbor.

In my opinion this is a necessity which should no longer be unprovided. I have to suggest that the necessities of the harbor require competent ice-breaking vessels during time of need, and this present severe winter has brought it more than ever into evidence.

On my own part, I recommend two competent ice breakers built on the latest plans, and suggest that they be fitted also as fire boats, in this way giving additional security at all times to the harbor, and during icy periods making sure that the ice breaking can be continuous. My reason for recommending two ice breakers rather than one is that having broken a channel, it is necessary

to keep it open, and to this end two boats are necessary. I believe you will find that this is the correct practice elsewhere in localities where ice breakers are constantly in use.

Not only the main parts of the harbor, but also the Kills and adjacent bays—Newark Bay, Raritan Bay, Princess Bay, Pelham Bay, Westchester Bay—all of which are now busy waters, bearing a great and constantly increasing traffic, require the services of ice breakers this year, and, doubtless, will in other years.

I would also suggest that the subject of light draft be considered in one of these ice breakers, so that it may be used for the shallow waters of the bays in question. I suggest, also, that these boats have ample power for breaking any ice which even the most severe season can produce.

Wishing you immediate success in your recommendations for competent ice-breaking vessels,

Faithfully, yours,

N. R. USHER.

Rear Admiral, U. S. Navy,

Commandant Navy Yard and Station.

HON. MURRAY HULBERT,

Commissioner of Docks and Ferries,

Pier A, North River, New York City.

The ACTING CHAIRMAN. This evidence can not be transcribed for the gentleman to correct to-day but if you want to extend or revise your remarks and will make arrangements with the clerk, the whole testimony can be sent to you in New York and you can invite the gentlemen to fix it up in any way that you want and make any changes or extensions.

Mr. HULBERT. I next want to call upon Representative Dale.

STATEMENT OF HON. HARRY H. DALE, REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK.

Mr. DALE. I am going to refer very briefly to the interest in this matter of Brooklyn, which is one of the large boroughs of the City of New York. I consider it my duty, owing to the agitation that has been going on over there for the last six months, to briefly present it to this committee. I realize that you have very attentively been listening here this morning and the early part of the afternoon and consequently I probably won't be able to say all I wanted to.

The merchants' associations and the manufacturers' associations, in fact, all of the civic bodies in the borough of Brooklyn, have taken a great interest in this proposition. A great part of that borough has its frontage on the East River, and I will refer only to the district that I have the honor to represent. So far as the water frontage is concerned, that runs almost from the Wallabout Basin, which is almost immediately connected with the navy yard, up to almost a line parallel with the Hell Gate channel. On that frontage are the largest manufacturing concerns in the world. I say that without any hesitancy. All of the large refineries of the American Sugar Refining Co. are there, and all the large cordage works are there, the large refineries owned by the Standard Oil Co. are there, and you can appreciate from all the things that are there the large piers that are necessary for the docking of the large boats which bring in and take out all that is necessary for the operation of the plants that I have referred to.

Now, back of that, of course, it must be admitted that there is a great population. I have no hesitancy in saying that there must be anyway 400,000 people there, a great many of whom are employed right in the plants that I have referred to. Now here is what I am driving at, and the remarks made by Commissioner Hulbert are very interesting as affecting this particular proposition, and that is "if when and where," as he stated, regarding the lump appropriation. It is contemplated now and as has been taken up by the associations that I have mentioned that the Government is going to take over these large piers. It may be necessary that in the very near future they will take them over for the purpose of taking out and bringing in whatever is necessary to properly prosecute this work. Now that is important, gentlemen of the committee. That being so, that especially must be done. If it is necessary to properly prosecute the war, you have got to take possession of the many large piers on that part of the East River which many of you are familiar with. When that occurs—it is going to occur—what is going to become of all of the large manufacturing plants on the river front. They have been establishing alternately large piers for the bringing in and the taking out of that which they have been manufacturing, and when the Government takes over the piers it will be necessary for us over there in the Borough of Brooklyn, fronting on the East River, where no more thickly congested part of any community exists—what is going to become of the manufacturing plants, which are at least indirectly necessary for the proper prosecution of the war? The answer to that is this, as has been so ably presented by Commissioner Hulbert, and where this lump-sum appropriation, as I believe it was characterized by the Commissioner, would come in for the preservation and protection of this great industry that will be crippled seriously if this committee does not seriously consider that proposition.

MR. HULBERT. Mr. Chairman, in order to conclude this hearing I am going to call upon the senior member of the New York City delegation, Hon. Daniel J. Riordan.

MR. GALLAGHER. I think that any of the New York delegation that wants to extend their remarks in this hearing should be given an opportunity to do so.

MR. HULBERT. Those who have attended the meeting I presume have noted their appearance, and I think if the clerk of the committee would inform them of that action they would all be glad to file statements.

THE CHAIRMAN. Without objection any member of the New York delegation of the city or State will have the privilege of submitting any remarks to be incorporated in the record of the hearings.

STATEMENT OF HON. DANIEL J. RIORDAN.

MR. RIORDAN. All the previous speakers stated that they would take up only one minute and took five. I am going to take about two and stick to it.

There is hardly a thing that can be said about these various projects that has not been very thoroughly covered, but I want to emphasize two points. In accompanying Commissioner Hulbert yesterday to the Navy Department, Capt. McKean, than whom there

is no more able man in the Army or Navy, and no better informed man, made a very significant statement. He said that we should secure the improvement of East River, and when we do get the improvements of East River, it will be possible to rendezvous the whole naval fleet in sheltered waters in Long Island Sound. There is not any question as to the truth of that statement. Anybody who has given a moment's consideration to the naval needs of the country knows how important that would be.

Nothing has been said about the coal conditions in New York. I represent the lower part of New York, Staten Island, and I think we are justified in finding fault with the delay of the Engineer Department of the United States Army. In the act approved August 8, of last year, there was a provision made to expend \$50,000 on the channel between Staten Island and Hoffman and Swinburne Islands. The bids were opened only day before yesterday. Now what has happened.

All the coal for eastern New York; in fact, all the coal for all of the eastern ports has to come through Kill Van Kull. This has been congested with ice and everything has been frozen up in there. We have plenty of coal for our immediate uses at the tidewater there. I saw in the paper day before yesterday that there were some 400,000 tons waiting there to be transported, retarded by weather conditions, retarded by the ice, because we have only one outlet. If this improvement had been begun and completed we could have gone out the other way and unquestionably got very much more speedy relief. Now those are the only two points I wanted to cover, the necessity of the immediate improvement of the East River purely from the war measure viewpoint and the expedition of the improvements for which the money is recommended by this committee and appropriated by Congress for our rivers and harbors.

New York, as Commissioner Hulbert says, is growing at the rate of 100,000 people a year. Commerce has grown up with even greater strides, and we should get these improvements. New York State and New York City has proven on every occasion its patriotism. In its first subscription to the Liberty loan the amount was greatly oversubscribed, the allotment to the second Liberty loan was greatly oversubscribed, the Red Cross fund, Y. M. C. A., and K. of C. fund, and only the other day the United Jewish Charities almost trebled their allotment. Every time that the people of the State of New York are called upon to perform a patriotic duty they will respond. If the Congress of the United States, if the Rivers and Harbors Committee will give us any sort of adequate relief, they can be assured the city of New York will more than meet them halfway, carrying out to the fullest extent any relief that is given.

That proves that I have kept my word and talked only two minutes.

MR. HULBERT. The meeting for the four matters that I brought up is completed. I wrote the chairman that there is a matter relating to a survey that I would like to bring up. I do not know whether I should bring it up before the committee or take it up with the survey committee.

THE CHAIRMAN. We will hear it now.

Mr. HULBERT. For some time there has been an agitation for a bulkhead on what is known as Bay Ridge and Red Hook Shoal, in the center of the bay, over which there obtains about 14 or 15 feet of water. This separates the extension of the Ambrose Channel from the Bay Ridge and Red Hook Channel which connects with Butter-milk Channel and goes up to the navy yard. We need pier sites in New York City. The people who own the land in the neighborhood of the Bush Docks, and that belongs to the Government now or probably will as soon as the deal is consummated, complain that under certain water conditions it is very difficult to berth vessels on the Brooklyn shore and for that reason they have urged the necessity of this breakwater. My suggestion is that if the Federal Government will construct a bulkhead breakwater on the outer side of this shallow reef that is on the side adjacent to the main channel coming into New York Harbor, which is about 2,000 feet wide and at the same time provide for a channel off the Bush Docks, 2,000 feet wide, so that channel will have the same width as the main channel which is used in coming into New York Harbor now, then the city of New York will undertake the construction of a fill from which there may be projected 21 piers and upon which fill there may be constructed 27 warehouses, access to which will be given by float barges for railroads, which will enable us to provide a very substantial relief for the congested commerce of the port of New York.

I have had the chief engineer in my department sketch this out. There may be a good many criticisms that can be offered, one of which I will make myself—that for the number of warehouses that he indicates there isn't enough railroad trackage. But that is a detail. My object was to bring it up and submit it to you gentlemen here and ask consideration by you of the insertion of appropriate language in the annual bill that will enable the city authorities and the State authorities—because the State has control of land under the water, which of course I assume we can obtain by a grant from them—and the assistance of the War Department in working out the necessary details so that the proportionate expense to be paid by the War Department and the proportionate expense to be paid by the municipal authorities could be determined, and the necessary legislation would then follow. To carry out this particular work the expense for the city of New York for the construction of these piers would be somewhere in the neighborhood perhaps of \$12,000,000 may be \$15,000,000, and the warehouse and railroad accommodations might cost in the neighborhood of \$65,000,000. I have discussed this matter with some of the most practical marine men in the city of New York, not one of whom has doubted not only the feasibility of this plan but have urged that it is a very substantial form of relief from the congested conditions in New York City. I should like to leave this particular map with the committee, would like to present it to you for your examination and consideration and to ask that some legislation be afforded in this coming bill that will enable us to take up the consideration and work out the details of this matter with the War Department.

The CHAIRMAN. Who was that bill introduced by—yourself?

Mr. HULBERT. Only for a survey. I have not had the opportunity to get to the part of drawing a bill.

The CHAIRMAN. Will you object if I submit it to Mr. Gallagher here now, or will you mail it?

Mr. HULBERT. What I wanted to do was to confer with the survey committee with regard to the form the bill ought to take.

Mr. DEMPSEY. Has the work on Hell Gate been started?

Col. NEWCOMER. We have just let the contract for the 40-foot channel through Diamond Reef. We advertised for bids earlier, but nobody would submit a price. The work is difficult and no contractor was willing to undertake it. After an informal conference we finally succeeded in getting a man who was willing to undertake the work at Diamond Reef. At Hell Gate itself we have not completed the arrangements however. We will probably have to do that with rented plants.

Mr. DEMPSEY. Are you going to let out the contract on the basis of a 35-foot channel or a 40-foot channel?

Col. NEWCOMER. On the basis of a 35-foot channel.

Mr. DEMPSEY. This bill provides for a 40-foot channel.

Col. NEWCOMER. No, sir.

Mr. RIORDAN. I am inclined to criticize the War Department in changing the instruction of Congress, which provided for a 40-foot channel.

Mr. DEMPSEY. I thought that was what we were getting.

Mr. RIORDAN. My attention has been called to the fact that the Chief Engineer's office is not carrying out the intent of the law of Congress.

Mr. HULBERT. May I have a moment on that. We got through an amendment for a 35-foot channel across Diamond Reef, and before the work was begun the War Department came in before us and recommended a 40-foot channel over Diamond Reef. The reason that was given for that was that by letting the contract for a 40-foot channel instead of for a 35-foot channel first and then going to 40 feet afterwards, the Government would make a substantial saving.

Mr. DEMPSEY. That is my understanding.

Mr. HULBERT. Now, if that is true of Diamond Reef, why isn't it true with regard to Hell Gate. If you are going to get a channel of 35 feet and then contract afterwards for a 40-foot channel where is the logic of it? The Army engineers deferred the construction of Diamond Reef under a 35-foot authorization until they could get a 40-foot authorization. Why make flesh of one and fish of the other? I thought when the bill became a law on the 7th of August that we would have a 40-foot channel through Hell Gate. I had conferences on the subject with Secretary Baker and with Secretary Daniels, and with the President himself, and it was the understanding that I got as the result of those conferences, and it was the understanding of Mr. Riordan, and I think it was the understanding of Mr. Dempsey, and I do not hesitate to say that it was the understanding of every Representative from the State of New York, that we voted for the bill because we believed that we were getting an authorization for a 40-foot channel through Hell Gate, and I think it is time to correct the misapprehension under which somebody is laboring.

Mr. RIORDAN. I intended to criticize the action of the War Department on that, because I think it is subject to criticism, but I did not have the time, and the matter was not touched upon.

The CHAIRMAN. Would you like to have the opportunity now?

Mr. RIORDAN. No.

Mr. DEMPSEY. It was my understanding, and I thought that it was the understanding of the committee that it was to be a 40-foot project that we voted for.

Col. NEWCOMER. I think that the matter may be cleared up by explaining some of the circumstances pertaining to the adoption of this project. Mr. Hulbert is mistaken in the impression that the Diamond Reef Channel was held up so as to get authority for the 40 feet.

Mr. HULBERT. I got through the amendment for a 35-foot channel, and when I found that the work was not being done and I called to find out why, I was told by Gen. Black that he proposed to recommend a 40-foot channel to save the necessity of asking the committee for the authorization for the 40-foot project later.

Col. NEWCOMER. The reason why was because after the authorization of the 35-foot channel the Navy asked for a 40-foot channel.

Mr. HULBERT. And they asked for a 40-foot channel through Hell Gate?

Col. NEWCOMER. No, sir; the law reads in accordance with certain documents, the documents providing for a 35-foot project. It was Gen. Black's report for East River, and that document is No. 140, or Senate Document No. 3, which was the document reporting the works necessary for a complete defense. But a reference to those documents will show, particularly the latter one, which was the one that mentioned the 40-foot channel through Hell Gate, that the joint board recommended 40 feet through Diamond Reef to the Navy Yard, which is being provided, and 35 feet through Hell Gate, to be deepened ultimately to 40 feet. This is the project which was considered and which it submitted in the report of the Chief of Engineers at the time this bill was under consideration, which provides 35 feet at Hell Gate. The committee at first was reluctant to authorize 40 feet through Hell Gate, which the Navy asked for. They authorized 35 feet, but subsequently it was decided that it would be better policy to authorize the full project as recommended by the Navy. When it came to appropriating the money Congress did not change the appropriation, which was for 35 feet, so the intention was very clear that Congress wanted 35 feet immediately and 40 feet ultimately.

Mr. HULBERT. I have not seen Document No. 140 for a long time, but I was very familiar with it when this provision was drawn. Mr. Small and myself drew this amendment and the subject was discussed at many conferences on my part with the War Department and the Navy Department, and even with the President.

Col. NEWCOMER. That document was clear on that point.

Mr. HULBERT. I prefer to rely on my memory to see how clear I am. That document provides four means by which the East River can be improved.

One was an ordinary 35-foot channel and another was a commodious 35-foot channel. Another was an ordinary 40-foot channel and another was a commodious 40-foot channel, and the only issue upon which there was any division in this committee was whether you were going to have an ordinary—that wasn't the word, it was "commercially navigable" or some such word as that—the only point on

which there was a division was whether you were going to authorize the necessary 40-foot channel or a commodious 40-foot channel. There was not any question about the ultimate 40-foot channel. Here is the language of the bill itself: "For improvement in accordance with the report submitted in House Document No. 188, Sixty-third Congress, first session, and for a 40-foot channel through East River and Hell Gate." That is in accordance with House Document No. 188, Sixty-third Congress, first session. That is the project for \$13,400,000 and for a 40-foot channel through East River and Hell Gate. That doesn't mean 35 feet now and 40 feet some other time. A 40-foot channel through East River means 40 feet, and that amendment was drawn by me and submitted to Mr. Small to put in the bill to carry out that intention. I understood, Mr. Riordan understood, and every man from New York who voted for that bill understood that we were getting a provision for a 40-foot channel and I submit that the Chief of Engineers can not read into the law a 35-foot channel, with an ultimate depth of 40 feet. He can not change the law as passed by Congress. Congress has not abrogated any powers. Here is an absolute declaration for a 40-foot channel, and I would like to know whether Congress will authorize the Chief of Engineers to set aside its language and to say in the face of the absolute urgency pointed out by the Navy that we are going to have only a 35-foot channel through the East River.

Col. NEWCOMER. May I be permitted to read from this document. The law says the project is adopted in accordance with these reports.

Mr. HULBERT. But for 40 feet.

The CHAIRMAN. I suggest that the colonel proceed without interruption.

Col. NEWCOMER. The report gives the recommendations of the General Board of the Navy, which was concurred in later by the Joint Board of the Army and Navy, and you will find on page 3 in item 61 (c), the item which we are now considering:

The only connecting channel the construction of which or the improvement of which the Navy Department considers necessary is the channel through Hell Gate and East River between New York Harbor and Long Island Sound. This channel should be given a depth of 35 feet as soon as practicable and an eventual depth of 40 feet.

Mr. HULBERT. I understand that, Mr. Chairman, but we have an actual provision making it 40 feet.

Col. NEWCOMER. Having adopted the project in accordance with this document, if you had provided only for 35 feet it would have needed additional legislation later on to get it 40 feet. We understand that Congress has authorized this project as asked for by the Joint Board for a 35-foot channel now and 40 feet eventually.

Mr. RIORDAN. I am not lawyer, but I have got common horse sense. If anybody can show me how any construction can be put on that except that it was the intent of the committee and the intent of Congress to put in a 40-foot channel through Hell Gate, I am ready to be shown.

Mr. HULBERT. Let me supplement what Mr. Riordan says on the question of construction. If in the framing of the bill we had said, "for improvements in accordance with the report submitted in House Document No. 188, Sixty-third Congress, first session," leaving out

the 40 feet, and in accordance with the report submitted in House Document No. 140, then this construction would justify Col. Newcomer providing as in paragraph 61 (C) for a 35-foot channel as soon as practicable and eventually a depth of 40 feet. This would be a proper construction to put upon the act of Congress. But in order to make a 40-foot channel available we modified House Document No. 140 by inserting in there that the channel was to be 40 feet from the time it was commenced. That is all there is to it.

Col. NEWCOMER. May I respond just a moment? The situation, I think, can be cleared up to your satisfaction, I trust, by the amount that was requested from the Engineer Department. That estimate was for a 35-foot channel. No estimate was made for a 40-foot channel, and the amount asked for was the amount appropriated. Congress appropriated the amount we asked for for a 35-foot channel.

Mr. HULBERT. The district engineer must have contemplated 40 feet when he asked for \$6,000,000.

Mr. DEMPSEY. I would just make a suggestion, Colonel. Let me call your attention, if you will follow me, to the language here, which is, "for improvements in accordance with the report submitted in House Document No. 188, Sixty-third Congress, first session." Now if there was to be an improvement in accordance with that document, wouldn't you stop right there, and say nothing more? But you don't do that. You say something more, "and for a 40-foot channel through East River and Hell Gate." Don't you have to, as a necessary construction, give the language its ordinary and plain meaning? It is to do two things, to improve the East River in accordance with that document and improve it so as to get a 40-foot channel.

There are other facts set out in the report as to the manner in which the improvements shall be made, but the specifying of this document would mean, would it not, necessarily, all except as to the depth of the channel? In other particulars it would follow that document, but as to depth of the channel you are concluded and fixed by the exact terms of the law itself. Wouldn't that seem to be the correct construction of the act? And in that connection I would call your attention, that in construing any law one of the primary constructions is this: That you resort to extraneous documents only when the law itself is not clear. Now if it is not clear here what the depth should be, if they had used language which was uncertain or indefinite or hazy, don't you see on its face then you would have the right to go to this estimate to find out what was meant? But it does seem to me that the language here does, and I am assuming now, and not arguing this with any heat at all, it is merely a cold and intended to be a very polite and differential argument—I have no question at all that the department construed this act in accordance with what they believed to be the intention of Congress, but I am just pointing out these things. I am enumerating what seemed to me to fix the meaning the other way, and to point out that an honest error, it seems to me, has been made.

Col. NEWCOMER. I may state that we were probably influenced in our interpretation of the law by the knowledge of the circumstances under which the law was prepared. In other words, as I stated before, when this matter was taken up, the committee was not willing

to authorize the 40-foot depth and for that reason they said in accordance with these documents, limiting to 35 feet in Hell Gate, they would not authorize completely and in accordance with that document; that they would go that far now and would go the rest of the way subsequently. They modified that and put in the limitation that authorized the 40 feet. We interpreted that simply that they had waived that temporary limitation in the project, and were willing to authorize a project for 40 feet, but they appropriated only the money which was estimated for the other and we inferred that was the intention. Now of course we are not concerned about this matter one way or the other. We are trying to carry out the will of Congress. If it is the will of Congress that we shall proceed at once with 40 feet, contrary to the recommendation of the General Board of the Navy and the joint board of the Army and Navy, or if Congress for any reason decides that is the case, we are perfectly willing to obey. I think you will find that as a rule that is our reputation.

Mr. DEMPSEY. There is no question about that.

Col. NEWCOMER. It is simply an honest intent to interpret a situation which was more or less ambiguous. You will remember that when I appeared before the committee in connection with the estimates that I explained to the committee the attitude of the department on this matter so that I might be corrected if a mistake had been brought to the attention of the committee before this.

Mr. DEMPSEY. I am going to restate very briefly as clearly as I can just what seems to me to be the argument bearing for the construction of a 40-foot channel. The law as indicated is in the conjunctive. It is not "or" but it is "and." The improvement is directed to be made in accordance with the report, and for a 40-foot channel. That would seem to me to necessarily exclude the consideration of the document for the depth of the channel and leave it to be followed only in other respects. The language as to the depth is perfectly plain in the law itself; it does not resort to extraneous instruments such as the estimates or the hearings to qualify it or to make it certain. It is in plain and simple language which can not be misunderstood. For these reasons it seems to me and I urge that the plain meaning is that there shall be a 40-foot depth as of original construction and not ultimately to be reached. There is nothing in the law with regard to ultimate depth, and nothing except a plain instruction as to 40 feet.

Mr. HULBERT. Mr. Chairman, in House Document No. 188, this \$13,400,000 project, we were entitled to a 35-foot channel. We provided for a 35-foot channel through Hell Gate. With regard to House Document No. 140, my recollection is that Col. Newcomer appeared before this committee and testified that a 40-foot channel through Hell Gate was not in his opinion urgently needed at that time. The matter had, however, been brought to my attention by the Navy Department. If you are going to take the question of extraneous matters for the purpose of determining the question of construction, then why not take the letters that were written by the Secretary of War and the Secretary of the Navy after the President had interested himself in this and they declared unequivocally for a 40-foot channel.

Mr. DEMPSEY. By the way Mr. Hulbert, those letters are not a part of the record. I was going to ask that so that they could be made a part of the record.

Mr. HULBERT. They were read into the Congressional Record (page 3690, take in letters) when the bill was under consideration in the House,; I shall put them in.

NAVY DEPARTMENT.
Washington.

Hon. JOHN H. SMALL, M. C.,
*Chairman Committee on Rivers and Harbors,
House of Representatives, Washington, D. C.*

MY DEAD MR. SMALL: In a letter of May 7, 1917, regarding the approaches to the navy yard at New York, I quoted from the General Board as follows:

"Deepen, widen, and straighten channels through Hell Gate to Long Island Sound to a depth of 35 feet, and eventually to 40 feet, with a channel adapted to the use of vessels up to 1,000 feet in length."

While deepening and straightening the channel through Hell Gate will be of unquestioned advantage to the commercial interests of the country the strategic value to the Navy is so great that I believe consideration should be given to securing this channel of 40 feet depth at the present time. While in the beginning a concession was made to obtain a depth of 35 feet and ultimately 40 feet, it is considered that it would be highly desirable, both from an economical standpoint and from a strategical standpoint, to have the work, after it was once begun, continued until the depth of 40 feet had been obtained throughout, and the straightening of the channel, in order to allow the easy and free passage of large ships as well as to prevent the formation of tidal eddies and currents, had been accomplished.

It will be readily understood that with a 40-foot depth of channel leading to the navy yard from the south and an equal depth through Hell Gate would practically double the strength of our fleet if concentrated in Long Island Sound, for the reason that the exits at Ambrose Channel and Montauk Point are so far apart that it would take double the force to contain our fleet in these waters in order to guard the outlets at both of these points to prevent the egress of our fleet.

A deep channel through each entrance is desired in order to permit of the passage of vessels at all stages of the tide and without undue risk to the large and very expensive battleships of the near future, and also to permit the passage of these vessels through either entrance after having been injured in an engagement off the coast in the immediate vicinity. New York, being the center of commercial interests on our coast and the great commercial activity and wealth extending particularly to the northward of this point, increases the probability of an engagement somewhere in the vicinity of the eastern end of Long Island Sound. This also increases the desirability of having a deep channel through Hell Gate in order to carry a vessel or vessels safely through that may have been injured in an engagement in the vicinity of Block Island or Montauk Point.

Sincerely, yours,

JOSEPHUS DANIELS.

There also came to the committee under date of May 15, 1917, a letter from the Secretary of War, which letter I desire to read:

WAR DEPARTMENT.
Washington, May 15, 1917.

Mr. JOHN H. SMALL,
*Chairman Committee on Rivers and Harbors,
House of Representatives.*

MY DEAR MR. SMALL: In the river and harbor bill, which I ventured to send for the consideration of your committee and for introduction into the House, I undertook, as you know, to provide for the continuance of necessary projects and the introduction of such new projects only as were directly concerned with the national defense in the present emergency. Many very desirable projects had to be omitted in view of the situation, and I have desired as far as possible to refrain from suggesting additions to the program contained in the bill. I have, however, taken up with the Secretary of the Navy the situation respect-

ing the channel through Hell Gate in the harbor of New-York, and after a full discussion of the subject the Secretary of the Navy has written you a letter in which he recommends that the bill be amended so as to provide for a 40-foot channel at that point. The bill under consideration looks to a present depth of 35 feet, and my judgment at the time the bill was drawn was that while the ultimate depth of 40 feet was contemplated the present improvement to 35 feet was all that could be at this time undertaken. As the result of mature reflection and in view of the recommendation of the Secretary of the Navy I beg leave to concur in the suggestion that an amendment be introduced providing for the present increase in this proposed depth to 40 feet. In other words, I am seconding the recommendation of the Secretary of the Navy, and I trust that you and your associates on the committee will find it possible to make this one change in the proposed measure.

Cordially, yours,

NEWTON D. BAKER,
Secretary of War.

I have looked at Document No. 140. I said a few minutes ago that I had not seen it for a long time. What I stated about it was correct except that I used the word "ordinary" instead of "practicable." The joint board made a recommendation for a 35-foot practicable channel through the East River between New York Harbor and Long Island Sound, then it provided for a commodious channel of 40 feet. Then it provided for a 40-foot practicable channel through the East River. Then it provides for a 40-foot commodious channel through the East River and Hell Gate, \$30,000,000. Now turning over to page 6 of that House document there is a summary in which it shows that there were two alternatives, a 35-foot channel and a 40-foot channel, and the committee in the preparation of that bill, rather in the introduction of the amendment which came in after the bill had been reported out of the committee, and was under consideration on the floor of the House, provided specifically for the 40-foot alternative. Congress says, "we hereby adopt House Document No. 140, providing that the channel which is authorized shall be 40 feet." That is what the language of this bill means and I do not know how anybody can get away from that interpretation.

The CHAIRMAN. The chairman would like just a few minutes without interruption. In view of the criticisms directed to the Chief of Engineers of the Army, that they have arbitrarily and improperly construed legislation by Congress, and having an opinion upon the matter myself, I think it only fair to the committee and to the War Department that I should make an expression at this moment.

The provision in the last river and harbor act, approved August 8, 1917, contains this language:

East River, New York. For improvement in accordance with the report submitted in House Document 188, Sixty-third Congress, first session, and for a 40-foot channel through East River and Hell Gate, in accordance with the report submitted in House Document No. 140, Sixty-fifth Congress, first session, \$1,250,000.

It has been universally the practice of the War Department in interpreting appropriations made by Congress for improvements in accordance with reports, to refer to the reports. The reports confirm the details and the conditions upon which the appropriation is made available. The Engineers in the expenditure may not depart from the terms and the conditions in the authorization. The first document referred to No. 188, Sixty-third Congress, first session, was a project for a 35-foot channel under the conditions set forth in that report. The next document referred to, House Document 140, Sixty-

fifth Congress, first session, was a second report under the authority of the naval appropriation bill by a joint board of the Army and Navy. Is that right?

Col. NEWCOMER. Yes.

The CHAIRMAN. The only specific recommendation in that report is this:

61 (c). The only connecting channel the construction or improvement of which the Navy Department considers necessary is the channel through Hell Gate and East River between New York Harbor and Long Island Sound. This channel should be given a depth of 35 feet as soon as practicable and an eventual depth of 40 feet.

That is the language that controls the adoption of this project in the law of August 8, 1917, to which I have referred and by which the War Department is absolutely bound. They can not depart from it. This language here that the channel should be given a depth of 35 feet as soon as practicable and an eventual depth of 40 feet is the language about which this discussion revolves. The War Department has construed the language that this channel should be given a depth of 35 feet as soon as practicable and an eventual depth of 40 feet. That means that they first shall provide a depth of 35 feet, and having obtained that they shall provide a depth of 40 feet. If the War Department has made any error, it has been an error made in the interpretation of this language. The language in the law "and for a 40-foot channel through East River and Hell Gate" is not controlling because it is followed by the language "in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session." and therefore it must be construed and interpreted by the language of this report, and this report says that it shall be given a depth of 35 feet as soon as practicable and an eventual depth of 40 feet. Now the War Department, I assume, through the Chief of Engineers, has interpreted that language to mean that they shall proceed first to give a channel of 35 and ultimately a channel of 40 feet, and they will make estimates from time to time.

There is no question that 40 feet has been authorized for the East River from the Upper Bay to Long Island Sound. That is authorized. It is only a question of when the 40 feet shall be provided, whether it shall be constructed to a depth of 40 feet in the beginning in the original construction or whether 35 feet shall first be provided and then 40 feet shall then be provided. I submit that upon this language it is hardly fair to charge the War Department with any arbitrary action. I think as a matter of law, with some deference to these distinguished lawyers, who have expressed a contrary opinion, that the interpretation by the War Department is correct. That language which recommends that the channel shall be given a depth of 35 feet "as soon as practicable and an eventual depth of 40 feet" may well be construed as a direction that 35 feet shall first be provided, and then ultimately we shall have a channel of 40 feet.

I have stated this because I have the very highest regard for the technical skill, the training, and the absolute integrity of the Army engineers. I have had a great deal to do with them and I would not approach, even as chairman of this committee, an Army engineer with any suggestion that I would not offer to a trial judge in a case in which I was appearing. I regard them as acting in a judicial ca-

capacity in the interpretation of these laws and in carrying out the directions of Congress. I do not think there is any intent on their part arbitrarily or intentionally to misinterpret the legislative direction.

I am in sympathy with this project. Mr. Hulbert has been most active. I can say without any desire to be unduly complimentary that the insertion of this provision was very largely due to the insistence of Mr. Hulbert, who was a member of this committee at the time and a distinguished Member of Congress, but I do not feel that when a suggestion is made that the department, through the engineers, has intentionally failed to interpret the act of Congress, that it is scarcely justified.

Judge MACLEAN. Accepting the very judicious and judicial explanation given by the distinguished chairman of the committee, it occurs to me to say something further. Accepting the construction given by your honor to the phraseology in the act, it seems to me that if there be any ambiguity in that phraseology, and the fact being now that a depth of 40 feet through the channel at East River is admitted to be necessary, not only for big freighters but for battleships—the Kiel Canal is 36 feet—it would be an excellent thing for this committee to recommend as a solution of the difficulty arising from this phraseology that the depth be made 40 feet. Thirty-five feet is not ample for the big freighters now carrying grain—as was shown in the hearing before the committee on the differentials between New Jersey and New York, at which hearing I happened to represent the New York State Waterways Commission.

The CHAIRMAN. Now, judge, I have learned this morning to have a great deal of respect for the working of your mind and the clarity of your expression, but I submit this to you. Assuming all that you say to be true, regarding the necessity for the 40-foot channel; and assuming that the act which authorized this project, report No. 140, contemplated 40 feet, yet the controlling feature is the recommendation which the joint board, acting under authority in the naval appropriations bill actually submitted, and they submitted a recommendation that the channel should be given additional depth to 35 feet as soon as practicable and an eventual depth of 40 feet. This discussion revolves around the interpretation of that language. Now it may have been the wiser course to pursue for the joint board to have provided a channel of 40 feet in the first instance. It was so easy to have said so. But they said that the channel of 35 feet should be provided as soon as practicable and an eventual depth of 40 feet, and the War Department has construed that language to mean the construction of a channel 35 feet now and ultimately, which means subsequently, increasing it to a depth of 40 feet. When you were on the bench construing an act of the legislature and the legislative language was plain, you would disregard any suggestions of context, and would see that the plain intent of the language was carried out, and that the court would enforce it. If it was ambiguous you would seek other sources in order to find out what the legislative intent was. Unquestionably the legislative intent is embodied in this paragraph. Now if the War Department has improperly interpreted that, why that is another question, but if you were called

upon to say whether their interpretation was strained or violative of the language, I think you would have some difficulty in doing that.

Judge MACLEAN. It seems that I have failed to make myself clear. Accepting all that the learned and distinguished chairman has said, even the compliments, my suggestion really went to this, that it might be pardoned and as I think would be very appropriate for this committee to resolve whatever ambiguity there may be in the matter by insertion in the coming bill or by any other direction that the channel should be 40 feet. The number of the House document which dealt with this matter I can not recall, but the necessity of a certain depth for the East River has been patent to the Navy Department, the officers of the Navy, for a long time. You will find in the document to which I refer, of which the number unhappily I can not give, that the discussions as to whether it should be 35 feet or whether it should be 40 feet were numerous. That matter passed through the hands of four and twenty of the most distinguished officers of the Navy and the most distinguished officers of the Navy recommended a depth of 40 feet, only one, as I recall it, recommending a depth of 35 feet. I think the chairman and the members of this committee will find upon due inquiry that unquestionably the depth should be 40 feet. I am not saying anything in regard to the interpretation of the act because I agree with your own interpretation of that. But it should be brought about that the lowest depth should be 40 feet.

The CHAIRMAN. Just a moment, if you please. I see now the phase of the subject to which you are directing attention. Now may I call your attention to this long practice. There have been scarcely any exceptions—I do not recall any, if there have been—Congress only adopts projects for the improvement of rivers and harbors, which are based upon examinations and surveys, which examinations and surveys were first authorized by Congress, and in adopting projects, as I said, it adopts them in accordance with the recommendations in the reports. Following that long-established practice, before this committee could recommend to Congress legislation that 40 feet be immediately provided in the original construction of this improvement, there would first have to be a submission or rather an authorization to the engineers or to some joint board like this was to ascertain whether they wished to modify their recommendations so as to provide 40 feet immediately.

Now the committee, certainly speaking for the chairman, has every appreciation of the importance of the great port of New York. My only purpose in intervening was to try to get down to the consideration of the interpretation of this report, and to see that if any mistake had been made in the authorization of the 35-foot channel as soon as practicable and 40-foot ultimately. It was not a mistake of Congress or the War Department, but it was a mistake, if at all, of the general board which made the recommendations. But I do wish to intervene when the suggestion is made and in an unreasonable manner that the War Department has misinterpreted and misconstrued the action of Congress.

Judge MACLEAN. This committee can have the advice of the engineers of the War Department and the advice of the General Board of the Navy and the joint board immediately or almost immediately. Would it be out of propriety to ask that advice?

The CHAIRMAN. If that board is still alive. If they are not functus officio and in pursuance of any wise action which they deem proper to take, they should now make a recommendation different from this, that is to say that a 40-foot channel should be provided immediately, it could be accomplished in that way.

Mr. DEMPSEY. One word. The chairman will, I am sure, recollect that I was as deferential and as courteous and as careful of imputing good as well as refraining from imputing arbitrary motives to the War Department as he is. I differ entirely from the chairman's conception of the act, and it seems to me that it can be shown conclusively by a very simple question that the interpretation placed upon it of being bound by the report and not by the act is absolutely impossible, and that it can be done by a very simple question.

The CHAIRMAN. May I just make this suggestion? There are ways provided by which a misinterpretation of any legislative act by any administrative officer may be corrected by an appeal to certain legal officers. Why not pursue that course?

Mr. DEMPSEY. I would like to spread this on the record. The act reads this way:

For improvement in accordance with the report submitted in House Document Numbered One hundred and eighty-eight, Sixty-third Congress, first session, and for a 40-foot channel through East River and Hell Gate, in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session, \$1,250,000.

Now, if we are to be bound by the House document alone, was there any necessity for inserting anything at all with regard to the depth? Wouldn't that be absolutely superfluous? In other words, aren't you bound simply by the document in other respects, but not as to the depth? If you had intended to specify all the particulars, you would have enumerated them. So far as you specify one, doesn't that control and leave the document in force except as to the one particular matter specified?

The CHAIRMAN. Your query is appropriate, as all yours are. But may I suggest this that when the act says "and for a 40-foot channel through the East River and Hell Gate," it didn't stop there. Now is there any question that a 40-foot channel has been authorized through East River and Hell Gate, and the manner and the time in which it shall be provided, the relative time between 35 feet and 40 feet, all those details are covered by the report, House Document No. 140, referred to, and that says that there shall be a channel provided of 35 feet as soon as practicable, and a depth of 40 feet eventually. So the language in the act referring to 40 feet only is effective in authorizing a depth of 40 feet, and there is no question that the depth of 40 feet is authorized.

Mr. RIORDAN. I am the man that criticized the reading of the act, and I still criticize it, and I agree with Mr. Dempsey. I say now that the War Department has read into the act of Congress something that is not there. That I knew something about. I knew nothing about what took place in this committee. That was something that Congress did not pass on. They passed specifically on a 40-foot channel for Hell Gate. That is the law. I am the one that started the criticism, and I am ready to stand by it, and I have got just as much respect for Col. Newcomer and Gen. Black or anyone on the Rivers

and Harbors Committee. I do not allege any reasons. I do not charge anything at all. But I do criticize their actions, and I think I am justified in doing so. I am not a member of this committee, and I am not in their inner circle. But I do know how that was put into the law. I did have something to do with that on the outside, and I know that the only information on the subject that I had, and the only knowledge that the Members of Congress had that voted for this law, and didn't have anything to do with the preparation of the bill and were not in the confidence of the Committee on Rivers and Harbors, some two hundred and odd men that voted, had no idea of anything but a 40-foot channel. I do not know how you beg the question. I think no other construction should be put on it.

The CHAIRMAN. I did not intend to say that anybody had been offensive to the Engineers. I repeat again the Engineers may be wrong, the War Department may be wrong, and it may be entirely proper to make an appeal to a legal officer.

Mr. RIORDAN. We have done it.

Mr. HULBERT. I am not given to offensive criticism of people or to any criticism unless there is absolute justification. I have criticized the Army Engineers with regard to this proposition, and I think with just cause. I have found the attitude of the Army Engineers toward the city of New York, in some cases—very few, I am glad to say—to be narrow, and I have correspondence in my files to support that statement. I have their declarations over their own signatures.

Now Mr. Gallagher opposed the river and harbor bill, as he had a right to do. Mr. Gallagher quoted on the floor of the House from the testimony of Col. Newcomer that a 40-foot channel in the East River was not needed, and you and I and every man who voted for that bill were opposed to that contention of Mr. Gallagher and thought we were getting a 40-foot channel for Hell Gate, and now it turns out we are not getting anything of the kind, except "eventually." That may be as far in the distant future as the 26-foot channel in the East River, which was provided for in 1868, and they haven't got it yet.

The CHAIRMAN. This is cumulative.

Mr. HULBERT. I want to ask if the appeal for the purpose of determining the question of this interpretation is first to the Secretary of War and then to the President.

The CHAIRMAN. I am not advised as to that. What I had in mind was that there must be some authorized procedure in perfecting an appeal from an administrative officer's interpretation of the law. The thought I had in mind was that the appeal might first be to the Judge Advocate General, the law officer of the department. Is he the law officer?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. And from him to the Secretary.

Col. NEWCOMER. The Secretary of War relies upon the Judge Advocate General.

Mr. GALLAGHER. It might go to the Department of Justice.

The CHAIRMAN. What I had in mind was to appeal to the Judge Advocate General and then to the Secretary of War.

Mr. HULBERT. My anxiety about the matter is, having assisted in the preparation of the amendment, having assisted in getting the

bill through the House, I have been contemplating certain improvements as commissioner of docks of the City of New York upon the theory that we have a 40-foot channel through Hell Gate. Now I find out as a matter of fact that we haven't got a 40-foot channel and I can not predicate the improvements proposed upon the supposition that we are going to have a 40-foot channel eventually. I can not interest the people in the proposed improvements unless I know we are going to have a 40-foot channel. That is all there is to it.

Judge MACLEAN. As the highest court of appeal is the legislature itself, why can't that appeal be taken by putting in an amendment relieving all ambiguity?

The CHAIRMAN. Because a part of the statute here, the legislation authorizing this improvement, is embodied in the report, and for the reasons stated that it is the universal practice of this committee and Congress not to change a project as recommended in a report without resubmitting it. That states the obstacle to which you refer.

Judge MACLEAN. Not disputing that in any wise or calling it into question, but because of our great interest in bringing this about in New York, we would like very well to have this committee directly, or through the Secretary of War, convene the officials who have joined in that report and have them make or refuse to make a recommendation about the 40 feet. It would then solve itself.

The CHAIRMAN. Suppose Mr. Hulbert and you gentlemen take up that matter with the Secretary of War and the Secretary of the Navy.

Mr. HULBERT. We took it up with them, Mr. Chairman; each wrote a letter recommending and urging that there should be a 40-foot channel.

The CHAIRMAN. It seems impossible for me to make myself clear, so the discussion on that phase of the matter is closed.

(Thereupon, at 2.45 o'clock p. m., the committee adjourned, subject to the call of the chairman.)





INLAND WATERWAY FROM NORFOLK, VA., TO
BEAUFORT INLET, N. C.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF INLAND WATERWAY FROM NORFOLK, VA.;
TO BEAUFORT INLET, N. C.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES
SIXTY-FOURTH CONGRESS

CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman.*

GEORGE F. BURGESS, Texas.

CHARLES G. EDWARDS, Georgia.

JOHN H. SMALL, North Carolina.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

DANIEL A. DRISCOLL, New York.

THOMAS J. SCULLY, New Jersey.

CHARLES LIEB, Indiana.

WILLIAM KETTNER, California.

SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.

H. GARLAND DUPRE, Louisiana.

WILLIAM E. HUMPHREY, Washington.

CHARLES A. KENNEDY, Iowa.

ANDREW J. BARCHFELD, Pennsylvania.

ROBERT M. SWITZER, Ohio.

ALLEN T. TREADWAY, Massachusetts.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk.*

JOSEPH H. MCGANN, *Assistant Clerk.*

DECEMBER 15, 1916



WASHINGTON
GOVERNMENT PRINTING OFFICE

1917



INLAND WATERWAY FROM NORFOLK, VA., TO BEAUFORT INLET, N. C.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., December 15, 1916.

The committee was called to order at 10.30 a. m., Hon. S. M. Sparkman (chairman) presiding.

STATEMENT OF LIEUT. COL. J. P. JERVEY, CORPS OF ENGINEERS, UNITED STATES ARMY.

The CHAIRMAN. Colonel, you were requested to come here to tell us about the Albemarle and Chesapeake Canal. We especially want to hear from you about the estimate made by you for the further improvement of that canal.

Col. JERVEY. The estimate for next year asks for \$1,000,000. and with that we propose to acquire the necessary rights of way for canal prism and for whatever additional dumping grounds might be needed, and in addition, we propose to start operations on the land cut between Alligator River and Rose Bay, or between Alligator River and Pungo River, if the recommendation of the last board in regard to change of routes is approved. It was my idea that this money would certainly be available not later than March 4, so that after that date I will be able to start in on acquiring right of way and either title or easement for dumping on whatever additional land we need for the whole purpose. I do not anticipate that there will be any difficulty in acquiring title to this additional land needed. We have found in the past that the people there were very willing to sell their land at a moderate price. They had recognized the advantage which the canal will be to them and we have had little difficulty in arranging the purchase of the land except where the title is doubtful. Of course, in that case we have had to resort to condemnation proceedings, the money being then paid by the United States court to the proper people when the question of title was judicially determined. So far as the dumping is concerned, if there were trouble regarding the title we could probably secure an easement; that is, simply pay a certain amount for the privilege of dumping. In most cases we have not had to pay for that privilege at all. People owning low land were only too glad to have it raised. So that I do not anticipate that there will be any undue delay in acquiring the necessary rights of way. In fact, I do not see why we should not have that cleared up by the middle of the summer or early in the fall of 1917. Of course, by that time I will have all my specifications ready and they will be sent in at once, and that will give us, ample time to enter into contracts for the expenditure of the remainder of the money.

Mr. BOOHER. How much of the \$1,035,000 that you had on hand June 30 is left?

Col. JERVEY. It is practically all pledged for contract dredging and for the operation of Government plant. None of that will be expended on the Pungo River cut-off. It will all be needed for the section between Norfolk and Albemarle Sound.

Mr. SWITZER. Can you tell me who makes the estimates for the cost of this right of way?

Col. JERVEY. They were all made in my office.

Mr. SWITZER. The probable cost will be \$154,000?

Col. JERVEY. Yes, sir.

Mr. SWITZER. Has any of that been secured yet?

Col. JERVEY. No, sir.

Mr. FREAR. What is the cost of building the entire canal?

Col. JERVEY. The new estimate was approximately—exactly \$5,297,108. That is a complete canal from Norfolk to Beaufort.

Mr. FREAR. Are you not making a new course for this canal?

Col. JERVEY. This estimate is for the course recommended by the last board. That includes the change.

The CHAIRMAN. That change is somewhat in favor of a reduction in cost, is it not?

Col. JERVEY. No; that is if you take the section between Alligator River and Pamlico River there is a slight advantage in first cost for the Rose Bay route, but the cost of maintenance by the Pungo River route will be considerably smaller, and if you capitalize that difference in maintenance it makes the Pungo River route cheaper than the approved Rose Bay route.

The CHAIRMAN. How many miles of right of way will you have to acquire?

Col. JERVEY. There will be approximately 23 miles, of which we must acquire about 20 for the expenditure of this \$1,000,000 now proposed. We will purchase probably 300 feet in width.

The CHAIRMAN. What is the acreage involved?

Col. JERVEY. It will be between 800 and 900 acres. Of course, we are including in that estimate all expenses in connection with the securing of the land.

Mr. FREAR. What is the average cost?

Col. JERVEY. That will be about \$16 an acre. There is about 800 acres. That is swamp land, excepting the portion of it at the southern end of the cut, which is more or less improved. The improved portion is a very small amount. If it is drained it is good land. Much of it we will fill in.

Mr. FREAR. It averages over \$150 an acre. Do you think that is a fair average for land in that section.

Mr. JERVEY. Well, of course, we are including in that all the expenses connected with the acquirement, and also the expenses of our survey, etc.

Mr. FREAR. What expenses are those?

Col. JERVEY. It would involve, of course, the preparation of all the maps and the looking up of titles, and things like that.

Mr. FREAR. Is not that furnished at the time you make your purchases?

Col. JERVEY. That is for condemnation proceedings.

The CHAIRMAN. What would you say the cost of the land would be for making the title and all preparatory work outside of the actual purchase—that is, the expenses including the purchase price of the land?

Col. JERVEY. That is included in the estimate. I could not separate it without any data before me. As a matter of fact I was sick all during the summer and I did not make the estimate. I was on the board which made the estimate for the changed route, but the estimate for the expenditure for the coming year I did not personally make.

The CHAIRMAN. I did not know but that you had some idea as to what the land would cost.

Col. JERVEY. I could only judge by what we have paid for some of the land. It would cost more than \$2,000 for the preparation of the maps, etc.; I should say the complete work and the preparation of the maps would cost \$6,000 or \$8,000. We have Government attorneys to pass on the titles, and that part of the work would entail no expense.

Mr. LIEB. You condemn under the State acts?

Col. JERVEY. No; it is in the Federal courts.

Mr. BOOHER. It is decided under the State laws.

Mr. FREAR. Deducting \$6,000 for the maps it would leave \$148,000 for the purchase of 800 acres, or about \$185 an acre as I estimate. Is that about right?

Col. JERVEY. That seems to be in accord with my figures here.

Mr. FREAR. And you say a great deal of that is marsh land—all excepting at the lower end. What do you think of that as an investment for the Government.

Col. JERVEY. Well, of course, that is a very high price for the land only. There would not be any damages.

Mr. EDWARDS. These figures are based, I assume, on the idea that all of the right of way will be purchased, and it is all going to cost something. In other words, you put an outside figure so that you would have enough to stand upon when you come to purchase the land.

Col. JERVEY. Yes, sir.

Mr. EDWARDS. Have any of the land owners given any lands to the Government.

Col. JERVEY. No lands have been given; no owners have actually given title for right of way. We have, however, been allowed to dump on land.

Mr. EDWARDS. Have you had any intimations on the part of parties down there as to their willingness to give any part of this right of way?

Col. JERVEY. No; I have had no written statement.

Mr. SWITZER. You made your estimate in the light of experience you had in similar lines of work?

Col. JERVEY. Yes, sir.

The CHAIRMAN. Do you remember what you have had to pay there per acre for land?

Col. JERVEY. From \$15 to \$30 per acre, as I recall.

The CHAIRMAN. What kind of land do you get for \$30?

Col. JERVEY. That was fair land. It is nearly all practically low land.

Mr. HULBERT. Colonel, do you know anything about the preliminary work that was done when this project was recommended to Congress? Were you familiar with it at that time?

Col. JERVEY. No, sir; that was done before I came to Norfolk.

Mr. HULBERT. I notice in volume 1 of the Report of the Chief of Engineers, page 527, it states the estimated cost of the work is \$5,400,000 for construction only. In order to arrive at those figures was there any definite plan adopted so far as you know of ascertaining what the rights of way would cost?

Col. JERVEY. I can only say, in the document which is referred to and which contains the original report (H. Doc. 391, 62d Cong., 2d sess.), estimates for rights of way are included in every case. I am unable to say exactly how they were arrived at.

Mr. HULBERT. Now, when you lay out a line of construction such as this you make a survey. Does that survey show the ownership and the character of the land to be required?

Col. JERVEY. As far as is practicable, it would show the character of the land, and the preliminary survey, so far as practicable, would find out who the alleged owners of the land were.

Mr. HULBERT. Before you report to Congress is there not some effort made to interview either the owners of the land, or parties who are familiar with its value, to ascertain what the reasonable cost would be to acquire that land?

Col. JERVEY. There is, yes.

Mr. HULBERT. Was that done in this case?

Col. JERVEY. I could not say positively that it was or was not, but presumably it was done as far as practicable.

Mr. HULBERT. Now, when you make up your separate estimate for the fiscal year do you consult the records of your predecessor to ascertain or determine just about what the rights of way would cost for that portion of the canal?

Col. JERVEY. They would be taken into consideration.

Mr. HULBERT. Now, did you do that in this case?

Col. JERVEY. This, of course, is an entirely new proposition between Alligator River and Pungo River.

Mr. HULBERT. Do I understand you have made a recommendation along that route without having made a survey and made an estimate of cost of the rights of way?

Col. JERVEY. A complete survey has been made of this proposed route.

Mr. HULBERT. The data, of course, would show who the probable owners of that land are.

Col. JERVEY. There would be a record of it in the field book, but it would not necessarily be printed in a public document.

Mr. HULBERT. Is there any effort made, when you have got together your field data from which the survey was made showing the probable cost of acquiring the necessary right of way?

Col. JERVEY. Yes, sir.

Mr. GALLAGHER. I would like to inquire, from you or the chairman, if the fact that the law provides that the prices are fixed by condemnation, what difference would it make—

Mr. HULBERT. It would make this difference—in order that this committee might know the cost of any new channel. So it would be necessary for the engineers, it seems to me, to find out what the cost

would be. Then again, the land might not be acquired by condemnation.

Col. JERVEY. In regard to the acreage, I notice in the report of the Chief of Engineers the statement (on p. 525) "to purchase of land for right of way and dumping grounds." Now, where we have purchased dumping ground, or secured dumping ground along the land cut between Norfolk city and Albemarle Sound, we have secured a right of way 1,600 feet wide, so that would multiply the acreage previously stated by me by $5\frac{1}{2}$, so that there would be 4,500 acres instead of 900 acres. Of course we have got the figures on land that we have purchased. This is an outside estimate we are giving here.

Mr. SWITZER. I would like to ask a question as to policy. Don't you think it would be the better policy to first see what these lands can be acquired for by private arrangement before dumping a million dollars into this thing?

Col. JERVEY. It does not seem to me to be a question of dumping. It is a question of being prepared. On the other hand, if we do not have the money and we go through the proceedings for the rights of way first, I anticipate the work would be delayed, which I think is more important than having this money appropriated.

Mr. SWITZER. Don't you feel that rights of ways could be secured much more cheaply if you would go to these people and try to make some previous arrangement for the land—hold out to them that they should deal with liberality to the Government in that respect and help to bring the improvement to that section—don't you think that would bring prices down?

Col. JERVEY. That is the method we have pursued in the past and I feel there will be ample time to do that.

Mr. HULBERT. I just want to ask the colonel whether the delay on this project was of any greater consequence than the delay on any other project in the country.

Col. JERVEY. That is a pretty wide question. I will answer it in this way. I regard it as important as any project with which I am familiar.

Mr. FREAR. In view of the fact that the commerce in the canal fell away about 40 per cent last year, what is the basis of your statement that it is as important as any other with which you are familiar?

Col. JERVEY. The falling off in the commerce is only a temporary one. It was due to the fact that there is a slightly greater draft on the Dismal Swamp Canal, and also to the fact that the dredges interfere with navigation. Now, I anticipate that as soon as the canal is opened between Norfolk and Albemarle Sound for 12-foot navigation, which we hope to have done practically some time early in 1918, that there will be a very large increase on that waterway. In fact, I expect practically all of the other traffic which now uses the Dismal Swamp Canal will go through this canal.

Mr. FREAR. Now, is it not true that all of the commerce between Elizabeth City and Norfolk will necessarily go through the Dismal Swamp Canal?

Col. JERVEY. No. Not necessarily. It will go down to Albemarle Sound and then around by the Government canal. It will depend upon the point on Pasquotank River they get the cargo. It is 18 miles from Elizabeth City down, and I believe all boats loading in that area will use the Government canal.

Mr. FREAR. Do I understand you to say, Col. Jervey, that it will be only 18 miles farther around through the Government canal from Elizabeth City to Norfolk?

Col. JERVEY. Yes, sir, than by the Dismal Swamp Canal.

Mr. FREAR (continuing). Than it would by the Dismal Swamp route?

Col. JERVEY. Yes. Of course, there will be a point reached eventually, as you go up the Pasquotank River, where it will be cheaper to use the Dismal Swamp route and pay the tolls, rather than pay the increased cost of towage via the Government canal route.

Mr. FREAR. Now, I notice here, in the engineer's report, that the reason for the decrease in the tonnage over the Government canal, is due largely to the fact that the timber has been cut out?

Col. JERVEY. Yes, sir.

Mr. FREAR. Now, it shows from the report how that loss occurred. That has nothing to do with the draft of the canal, has it?

Col. JERVEY. Is not the statement made that the decrease in the traffic is due to war conditions?

Mr. FREAR. No.

The CHAIRMAN. Here is what it says, on page 527 of the report. [Reading:]

The decrease in tonnage and increase in value is due principally to the decrease in shipments of lumber, logs, and fertilizer, and the increased valuation of almost every commodity shipped.

It does not, however, say what causes the decrease in shipments of lumber, and so on.

Col. JERVEY. An investigation at Norfolk shows that the decrease in the lumber shipments was largely due to the war.

Mr. KETTNER. You state that most of this is swamp land?

Col. JERVEY. Yes, sir.

Mr. KETTNER. Will you kindly give your definition of swamp land? Is it worth anything at all?

Col. JERVEY. If it is susceptible of drainage.

Mr. KETTNER. I mean in its present condition, is it worth anything? Do they use it for anything, or can they use it for anything in its present condition?

Col. JERVEY. There is some lumber there.

Mr. KETTNER. And that has not been entirely removed?

Col. JERVEY. Not entirely; no. And parts of that land, especially along the Dismal Swamp Canal, have been drained—

Mr. KETTNER (interposing). I am speaking of this—you state that 90 per cent of it is swamp land; I am speaking of that portion.

Col. JERVEY. Its only value at present, as I stated, except near the Pungo River, would be for the lumber.

Mr. KETTNER. How deep is the canal?

Col. JERVEY. Twelve feet.

Mr. KETTNER. And how wide is it?

Col. JERVEY. It varies; in the land cuts, which would cover the portion under consideration, we have a bottom width of 90 feet.

Mr. KETTNER. Now, this dredged material would be placed on the swamp lands, would it not?

Col. JERVEY. Yes, sir.

Mr. KETTNER. And this dredged material that would be put on that land is rich, is it not, unless it is salt water there?

Col. JERVEY. The portions adjacent to the Alligator River—I should say that the water might be brackish; but I do not believe it will be sufficiently salty to affect the value of the land agriculturally.

Mr. KETTNER. Now, that dredged material after it is put on that land would make it very rich and valuable, would it not?

Col. JERVEY. Well, that would depend; where we pump out mud, it would make it very rich; at times we strike pockets of sand; and that is not of much use agriculturally.

Mr. KETTNER. But the point I am trying to get at is this—and you will know this both as an engineer and as a business man—that in dredging this material, one would naturally suppose that all of the land you reclaim would be made valuable land, because you would put that rich material on it. In other words, it is like building up land with sod; we pay good prices to get sod; and in my own State (California) we reclaimed hundreds of acres of land around Tulare Lake in that way.

Col. JERVEY. I should say that the value of these lands would in general be greatly enhanced by the deposits.

Mr. KETTNER. Now, do you not think that under those circumstances the people along those canals could well afford to get together and give those lands to the Government free of cost?

Col. JERVEY. That, of course, is an object which we will make an effort to attain as far as practicable; but at the same time, until we know positively that we can do it, the only safe way is to estimate on the basis of buying those lands.

The CHAIRMAN. Well, as a general rule it would be sound business policy to have the localities furnish the rights of way before the canals are constructed; I am not speaking of this particular project alone. Do you not think it would be a good idea to establish such a policy? Again, would it not increase very materially the value of that land there to have a canal through it?

Col. JERVEY. Yes, sir; undoubtedly.

The CHAIRMAN. In the first place, it would tend drainage toward it. In the next place it would furnish the people along the canal a means of transportation where there is none now.

Col. JERVEY. Well, one of the branches of the Norfolk Southern goes in that section.

The CHAIRMAN. Now, I take it that down in that section—in fact, in a y section in which such a canal would run—the value of the lands would be very materially enhanced by reason of the construction of the canal. So that it occurs to me the people could very easily and very properly be required to furnish the right of way free. I am not referring to this particular place alone, but generally as to the propriety of such a rule.

Col. JERVEY. It would seem to me to be a little hard to require individuals to furnish the rights of way for a waterway which is to be of general public benefit. If communities were required to do so, that would be a different proposition.

The CHAIRMAN. Well, if I had 40 acres of land anywhere situated like these lands, and I could get a canal through it, I would give a right of way free.

Mr. KETTNER. That is, you would be glad to get the other 300 feet filled with the dredged material from the canal?

The CHAIRMAN. Yes.

Mr. EDWARDS. Col. Jervey, in contemplating the making of the cut through there, do you expect to make provision so that laterals could cut into that canal for drainage purposes?

Col. JERVEY. We always provide for drainage by leaving open channels where streams would naturally come into the canal.

Mr. EDWARDS. But you do not take into consideration allowing lateral trenches to be cut into the canal for drainage purposes?

Col. JERVEY. We have not determined as to that. Of course there would be a necessity for its caring for 800 feet on each side of the center of the canal; but we have not gone far enough to determine whether any laterals would have to come into the canal.

Mr. EDWARDS. Well, if any lands were so situated that the owners would have to get a lateral cut to the canal, they would first have to obtain the permission of the War Department before they could cut the lateral through to the canal, would they not?

Col. JERVEY. Yes, sir; they always have to get permission from the War Department first.

Mr. EDWARDS. Now as to these estimates, I understand that they are made simply as a kind of outside figure?

Col. JERVEY. Yes, sir.

Mr. EDWARDS. And I understood you to say that you were going to try to secure the rights of way gratuitously if you could?

Col. JERVEY. Yes, sir.

Mr. EDWARDS. And if you could not, then you were going to buy them just as cheaply as you could, and in case condemnation proceedings were necessary in any cases, those lands would be condemned at as cheap a price as possible?

Col. JERVEY. Yes, sir.

The CHAIRMAN. Right along that line, I would like to ask you this question, Col. Jervey: What do you think would be a fair price, then, to pay for this land?

Col. JERVEY. I think the actual cost should be between \$15, and possibly, for a small amount of it, \$50 per acre.

The CHAIRMAN. Do you think that \$20 would be an average?

Col. JERVEY. Well, I would like to put it a little higher than \$20; I should say \$25 would be the average.

The CHAIRMAN. \$25 would be the average? Then, that would be how much for 800 acres?

Col. JERVEY. Well, I would change that to 4,500 acres, and then that would include the dumping grounds.

Mr. KETTNER. Well, you just made the statement that that dredged material would improve the land on which it was put. Do you think that people ought to charge you for dumping grounds when you improve the value of their lands by the material you put on them?

Col. JERVEY. Well, I have got to estimate for that: I have got to be prepared for the possibilities. I can assure the committee, however, that every effort will be made to protect the interests of the Government.

The CHAIRMAN. Yes; but unless we help you in some way to do that your efforts will probably be futile. If we put in the appropriation bill \$154,500 for payment for those lands the owners will be very apt to ask \$154,500 for the lands.

Mr. HULBERT. Mr. Chairman, may I ask Col. Jervey a few questions along that line?

The CHAIRMAN. Well, I would first like to get at just what he wants; should it not be provided that payments for this right of way should not exceed a certain amount, Col. Jervcy?

Col. JERVEY. Well, 4,500 acres at \$25 an acre would be \$112,500.

Mr. GALLAGHER. Most of that swamp land at \$4 an acre would be very high.

Col. JERVEY. I do not believe you could get it for that.

Mr. FREAR. Mr. Chairman, I would like to say this, after a brief conference with the colonel, and I think Col. Jervcy will bear me out. I made a statement about this on the floor of the House and it was contradicted, and I just want to have the record show that I was right. From the map which you have just examined, Col. Jervcy, I will ask you whether, from Norfolk to Elizabeth City, by way of the new canal—that is, the Government canal you say it amounts to about 81 miles.

Col. JERVEY. I can give you the figures exactly now, in order to correct that former statement.

The CHAIRMAN. What was the question?

Mr. FREAR. The question is whether or not this Dismal Swamp Canal is going to be abandoned, as has been urged, by the completion of the Government canal. My statement on the floor of the House has been that it is about twice as far from Elizabeth City to Norfolk, going down the river and then up the Albemarle Sound and the North River, as by a direct line over the Dismal Swamp Canal, as shown by the map; and Col. Jervcy's figures, roughly estimated, are 81 miles by one route to 40 miles by the other. Of course, both figures would run higher on the actual measurements—which would be practically as I figure it, and I am familiar with the locality.

The CHAIRMAN. Well, I suggest that Col. Jervcy put those figures in the record.

Mr. FREAR. Yes; I would like to have the correct figures, showing the comparison in the record; because I do not want that error to remain.

The CHAIRMAN. Can you not get the figures later and put them in the record, Colonel?

Mr. FREAR. Yes; I wish you would, simply to make that correction in the record.

Col. JERVEY. All right; I will do so.

(The statement referred to is as follows:)

The distance from Norfolk to Elizabeth City by way of the Dismal Swamp Canal is 51.7 statute miles; by way of the Government canal, 89.4 statute miles.

Mr. GALLAGHER. I would like to ask you this question that bears upon the value of this land, Mr. Jervcy: Do you know what this swamp land that you speak of, what the value of it per acre is as it stands on the tax books down there?

Col. JERVEY. No, sir; I do not.

Mr. LIEB. I would like to ask just one question along that line: In what size bodies are those lands owned? What is the smallest amount owned by one person, and what is the largest amount owned by one person?

Col. JERVEY. We have purchased as small as one and a fraction acres from a single person, and probably as high as 150 or 175 acres; it is usually divided up among a great many different owners.

The CHAIRMAN. How many owners would you have to deal with in order to get this right of way, approximately? We would not expect you to know exactly.

Col. JERVEY. Well, I think a considerable amount along that route is owned by large lumber companies; so that I hope the number of property owners there will be comparatively small.

The CHAIRMAN. Then you do not know who they are?

Col. JERVEY. No, sir.

The CHAIRMAN. And you have not taken any steps to find out?

Col. JERVEY. No; we had no money.

The CHAIRMAN. And you do not know anything about the nature of the titles to the lands?

Col. JERVEY. No.

The CHAIRMAN. You do not know whether they are good titles or not—such as the Government would accept?

Col. JERVEY. Well, I will state, from past experience, that in all probability we will not have any difficulty in securing title.

The CHAIRMAN. Now, the actual amount you want for the canal proper is about 800 acres; and the balance of that 4,500 acres is for dumping purposes?

Col. JERVEY. For dumping purposes.

The CHAIRMAN. Do you want to buy that outright and obtain a fee simple title?

Col. JERVEY. We may have to do that.

The CHAIRMAN. Well, would it not be better—if the land is worth as much as you say, from \$25 to \$30 an acre—would it not be a good investment for the Government to buy and own it and if advisable, sell it later?

Col. JERVEY. Well, it has been my experience that if the Government had anything to buy, it usually pays a good deal for it.

Mr. HULBERT. And if it has anything to sell, the Government gives it away.

The CHAIRMAN. Well, I know that; and that is why I am trying to get at these facts. Suppose you simply acquire the privilege of dumping on those lands, would you have to pay for that.

Col. JERVEY. That would depend on several things; if it is low land, with no timber on it—

The CHAIRMAN (interposing). Well, most of it is of that character, is it not?

Col. JERVEY (continuing). We would probably get the privilege for nothing. If timber would have to be destroyed, we would undoubtedly have to pay for the value of the timber.

The CHAIRMAN. You have not yet answered my question. How much is that going to cost? You do not know how much timber there is there, do you?

Col. JERVEY. No, sir.

The CHAIRMAN. You can not give the committee any idea as to what that right of way will cost?

Col. JERVEY. Well, I know that this estimate of \$150,000—

The CHAIRMAN (interposing). Well, I do not think your statement agrees very well with that estimate. Of course, you did not have much to do with it originally. Now, if you only want 840 acres for right of way and buying the title outright will cost you somewhere in the neighborhood of \$25 an acre, and you acquire the balance of the land,

that to be used for dumping purposes, for nothing, you would not, of course, need \$112,500 for that purpose, because 850 acres at \$25 an acre would not cost that—only about \$21,000.

Col. JERVEY. Well, I have to make up the estimate on that basis. I have to put in an outside estimate that is not apt to be exceeded, and it does not seem to me that an average of \$34 an acre, considering the fact that it will embrace all of that—

The CHAIRMAN (interposing). I thought you said \$25 an acre.

Col. JERVEY. I am talking of the estimate, which is based on \$34 an acre.

The CHAIRMAN. Well, if you are going to pay \$25 an acre for the land you have to buy outright, and are going to get the dumping privilege free, you will not need \$150,000. But if we appropriated \$150,000 for the right of way and the dumping privilege, you are going to pay something like that amount.

Col. JERVEY. I do not think, Mr. Chairman, that the general public will be aware of the amount of this item here.

The CHAIRMAN. Do not believe that; the man who owns the land is going to find out where the money comes from to pay for it and what sum the purchaser expects to pay. That has been my experience.

Now, if there is any way by which we can make the purchase of this right of way without paying too much for it, we want to do it. Can you advise us just how to do that, Col. Jervey, so as to enable us to help you to purchase at a reasonable figure?

Mr. GALLAGHER. Mr. Chairman, it looks to me as if that is a matter that we ought to thrash out in the committee. I think he will act merely upon our direction.

Mr. HULBERT. But he is familiar with the lay of the land down there.

Mr. GALLAGHER. Well, he says that they ought to be able to purchase the right of way for so much.

Mr. FREAR. May I ask a question along that line, Mr. Chairman?

The CHAIRMAN. He has not answered my question yet.

Mr. FREAR. This is right in connection with yours. Why is it necessary, Col. Jervey, to buy five times as much land for dumping purposes as for the right of way, through that very section where it is swamp land?

Col. JERVEY. This material is moved hydraulically and is delivered by a large pipe line, mixed with a very large volume of water, probably 90 per cent of water, and, of course, the dredged material is in suspension and spreads over a very large area. We have to provide large settling basins in order to give it a chance to settle. If we have small basins the dykes would overflow and burst, and if the basins are not made large enough to permit the stuff to settle, it will come back into the canal.

Mr. FREAR. Well, will it not be more satisfactory to dredge that with a shovel dredge in such a case as that, than to buy extensive grounds for dumping ground, if you have to buy it?

Col. JERVEY. No; the lighter dredging and dumping would involve transportation to long distances, in some cases, which would be an added expense, and the actual cost of dredging of that kind is very much more expensive. I should say that dipper dredging and transporting to the dumping grounds, some distance away, would cost

twice as much as hydraulic dredging even if we allow for the cost of the purchasing of lands for settling basins.

Mr. FREAR. Well, that is just what I wanted to find out.

Mr. KETTNER. In line with that, the chairman has asked if you do not think it would assist you in acquiring those lands, if we should include in this item of \$1,000,000 for the construction of that canal \$50,000 for the purchase of the right of way? Do you not think that the people who are interested in that canal in that community would dispose of their lands cheaper in that way—if you would go to them and say, “We have just \$50,000 for this purpose”? Do you not think that would assist you in acquiring lands at a reasonable figure?

The CHAIRMAN. I would suggest providing “That not exceeding \$50,000 of this sum may be used”——

Mr. KETTNER (interposing). Just a minute. Do you not think that that would give you a leverage that you could use with those people?

Col. JERVEY. I do not think the rights could be secured for \$50,000.

Mr. KETTNER. Do you not think that the people are interested in the canal at all?

Col. JERVEY. They are interested in it.

Mr. KETTNER. To what extent?

Col. JERVEY. I do not believe that individuals would feel sufficiently interested in it to consider that it was incumbent upon them to give to the Government a right of way for means of transportation which would benefit not only them but the entire community. If I may make a comparison, it would be a little like expecting owners along an improved highway to bear the entire cost of the construction of the highway.

Mr. KETTNER. No; the communities are not interested in this canal, are they?

Col. JERVEY. Yes, the communities are very much interested in this canal; but it would be a new thing sprung upon them suddenly, under a method which had not been pursued, with the securing of the rights of way along the rest of the canal; and I am of the opinion that the community would feel that they were being unjustly treated.

Mr. KETTNER. Thank you.

Col. JERVEY. I am still trying to answer the question——

Mr. HULBERT (interposing). Col. Jervay, did I not understand you to say that the principal benefit which would be derived, so far as the immediate locality is concerned, if the canal was constructed, would be to get the lumber out of there?

Col. JERVEY. Yes, undoubtedly, the principal commodity produced there at present is lumber.

Mr. HULBERT. Did I not also understand you to say that a large part of the land was owned by lumber companies centered right in that vicinity?

Col. JERVEY. I do not think I made the statement that the larger part was owned by lumber companies, I think I said a large part of it was owned by lumber companies.

Mr. HULBERT. Well, so far as the interests of that lumber concern are involved, do you believe that they would be willing to donate that right of way to the Government, in consideration of the Government providing them with a channel through which they could make shipment of their lumber to the markets?

Col. JERVEY. It is possible that some of the lumber concerns might be willing to do that; if I made any statement in regard to it, it would be an opinion based on insufficient data, and I do not believe it would be of much value. I could only state that no rights of way, so far as I recollect now, have thus far been donated for the canal.

Mr. HULBERT. What, in your opinion, would be the effect if this committee should determine not to appropriate the \$1,000,000 unless local interests would contribute the right of way?

Col. JERVEY. I think primarily it would result in a long delay in the completion of the work; eventually it might result in forcing certain property owners to the conclusion that it was advisable to donate the right of way; but I am also of the opinion that the cost to the Government resulting from the delay would more than offset any small saving which might result from the donation of parts of the route.

Mr. HULBERT. In what respect would the Government suffer by reason of that delay?

Col. JERVEY. Our force would have to be disorganized and discharged, and we also have a Government dredge down there which would be laid up, and of course she would deteriorate and her crew would be discharged—

Mr. HULBERT (interposing). Well, are there not other instances of that kind where the force has to be disbanded due to lack of appropriations?

Col. JERVEY. Yes; that is one of the unfortunate features of the failure of an appropriation—it always adds to the expense of the completion of a project.

Mr. HULBERT. Well, do you know of any projects anywhere in the United States where the work is being held up because the right of way has not been secured, where there has been a disbanding of the working forces of the Government?

Col. JERVEY. I can not recall.

Mr. HULBERT. Do you regard the importance of this particular waterway as any greater, for instance, than the improvement of the harbor of the city of New York?

Col. JERVEY. No.

Mr. HULBERT. Do you know whether any work in New York Harbor is being held up until rights of way are secured?

Col. JERVEY. I do not know.

Mr. HULBERT. That is all.

Mr. TAYLOR. Col. Jervcy, if the proposed project was not in contemplation and the Government owned these lands, what would be their reasonable or probable value per acre, according to your judgment?

Mr. FREAR. May I supplement your question, Mr. Taylor, by adding "in their present condition"?

Mr. TAYLOR. Yes.

Mr. FREAR. Will you answer the question, Col. Jervcy, as supplemented?

Col. JERVEY. I should say about \$10 an acre; that is, for the swamp land; and I think \$30 an acre for the agricultural land.

Mr. BOOHER. Mr. Chairman, I am obliged to leave the committee at this time, and I should like to make this statement before I go;

that if you determine this proposition before I return to the committee I want to make the suggestion that, before we make this appropriation of \$1,000,000, we direct that the district engineer, or some other authority, ascertain the actual cost of that right of way.

The CHAIRMAN. Well, if this matter is going to be contested, we had better pass it over for an executive session.

Mr. BOOHER. Well, I would like to get this also in the record—and then the committee can determine whether or not we will adopt the modified plan and change the route, or let it go over the old route.

Mr. HULBERT. Mr. Chairman, I would like to supplement that statement a little—

The CHAIRMAN (interposing). Well, before we get into any further discussion on that point, let me say this, because it may settle the very question you want to speak about: I want to ask Col. Jervey whether, if we make an appropriation here, according to his plan, and leave it to the discretion of the Secretary of War, or of the Chief of Engineers, to adopt this new route, provided rights of way can be secured at a satisfactory figure—whether that would not aid him in acquiring the lands?

Mr. FREAR. Well, how does that protect the Government?

The CHAIRMAN. Well, we do not have to have the right of way along that route; and following my suggestion, one of them would be bidding against the other.

Mr. FREAR. Yes.

Mr. SMALL. Do you know of any precedent for first ascertaining the cost of rights of way for property to be acquired by the Government before an appropriation is made for an improvement, Judge Booher?

Mr. BOOHER. Well, I do not know of any project of that kind in the rivers and harbors appropriation act; but it is the best way of doing, and the way that railroads do in acquiring land.

Mr. SMALL. Well, I am speaking of the precedents now.

Mr. BOOHER. No, I do not know of any precedents.

Mr. TAYLOR. Mr. Small, are these lands in your district in North Carolina?

Mr. SMALL. This particular section, between the head of Alligator River and Pungo River, or between the Alligator and Rose Bay—the route I recommended—was from the head of the Alligator River to the Pungo River; that is in a county in my district known as Hyde County, and I am familiar with the situation there.

Mr. TAYLOR. The reason I want to know is this: In the exercise of eminent domain proceedings in my State the enhanced value of the adjacent land is not to be taken into consideration. Is that the law in your State?

Mr. SMALL. No; in North Carolina the benefits to the land are considered in taking the valuation.

Mr. FREAR. May I ask a question of Col. Jervey? In condemnation proceedings to acquire those lands, are the values submitted to jurors?

Col. JERVEY. They are submitted either to jurors or to commissioners appointed by the judges.

Mr. FREAR. What is your experience as to the prices that are paid under those circumstances, as compared to the actual value of the land? I am speaking generally, and not as to this particular project.

Col. JERVEY. As a general rule, I think that where a government, either Federal or State, or even a public-service corporation, acquires property by condemnation the jury is apt to fix a figure which is somewhat in excess of the market value of the property.

Mr. FREAR. Is it not largely in excess?

Col. JERVEY. Not always.

Mr. FREAR. Almost invariably so.

Col. JERVEY. I think that is partly due to the fact that often the property is taken contrary to the wishes of the owner, and this increased price, in part, is to cover his mental damages, so to speak.

The CHAIRMAN. Well, I do not think that would cut any figure, as to why they do it; we know that they do it; we do not care so much to know why they do it.

Mr. FREAR. Yes, that is true. Now, \$100,000 has been put into this item of the appropriation of \$1,000,000, for office expenditures, etc. What do those consist of?

Col. JERVEY. They consist of the expenses of running the central office in Norfolk, the upkeep of our various inspection boats, and the payment of the various field parties connected with the work.

Mr. FREAR. Is there any other income that goes to the Norfolk office? Are there any contributions made from any other appropriation?

Col. JERVEY. At present, there is no other considerable item; we have a small appropriation for James River, and we will in time have allotments for fortifications work.

Mr. FREAR. Well, this estimate shows \$100,000 of expenditure for office expenses, superintendence, etc., for an expenditure of something less than \$700,000 in dredging. We had a case the other day, where it was shown that one-third of the appropriation was being used for office expenses and superintendence. Is there any usual percentage which governs those office expenditures?

Col. JERVEY. I have usually taken 10 per cent of the appropriation for the total supervising expenses, which I think is a reasonable figure.

The CHAIRMAN. I think perhaps a better person to answer that question would be somebody in the office of the Chief of Engineers, because he could strike an average, which Col. Jervcy might not be able to do.

Now, coming back to this project, do you think the entire \$1,000,000 would be needed as called for by the estimate?

Col. JERVEY. So far as I can see, Mr. Chairman, unless there are some delays which are extraordinary, and which I do not now foresee, I do not see how the appropriation can be reduced.

The CHAIRMAN. How far would this \$1,000,000 carry you in the work?

Col. JERVEY. It would complete about 40 per cent of the section between Albemarle Sound and Pamlico River.

The CHAIRMAN. Well, will it complete the canal to be cut through lands the right of way of which you want to purchase?

Col. JERVEY. No; it would not be sufficient to do that. I should say it would complete, roughly, 60 per cent of that.

The CHAIRMAN. Upon what do you base the figure of \$1,000,000? What did you take into account?

Col. JERVEY. It was what we thought we could reasonably undertake during the year.

The CHAIRMAN. Well, you use your own dredge and equipment part of the way?

Col. JERVEY. We have one dredge.

The CHAIRMAN. And you have part of it under contract?

Col. JERVEY. Yes, sir.

The CHAIRMAN. Well, how much have you been expending heretofore in a year?

Col. JERVEY. From \$500,000 to \$800,000. This year we had an appropriation of \$1,000,000, all of which has been allotted or pledged.

The CHAIRMAN. Your idea in asking for a larger amount would be that you could make a better contract for it, although it might not all be expended?

Col. JERVEY. Yes, sir; and also the question of time, trying to complete the work in the time that was set.

Mr. SMALL. Mr. Chairman, I would like to make a brief statement before we adjourn, which I would like to have go in the record. I will endeavor to confine it to facts, and omit any argumentation as much as I can.

Mr. Chairman, we find in the annual report of the War Department a recommendation for an appropriation of \$1,000,000 toward the further improvement of the inland waterway from Norfolk, Va., to Beaufort Inlet, N. C. Sufficient amounts have already been appropriated to complete that section from Norfolk to Albemarle Sound. The amount of \$1,000,000 estimated is for the further improvement of this waterway, from across Albemarle Sound to Alligator River, in which there will be very little dredging done, and then from the head of Alligator River, by land cut to Rose Bay, or Benedicts Island, as originally recommended by the report adopted for this project, or to Pungo River, the modified route subsequently recommended, on an examination and survey ordered by Congress.

In making up this \$1,000,000 the engineers have made the estimates, which include purchase of rights of way and dumping grounds between Albemarle Sound and Pamlico Sound, the section I have referred to, and the operation of the Government dredge, the amount to be contracted for for further dredging and engineering supervision, and contingencies.

In this estimate there is \$154,500 for rights of way from the head of Allegheny River to Rose Bay, or Pungo River, as Congress may direct; and a question has arisen as to the purchase of the rights of way.

As I understand from the evidence of Col. Jervy and from my knowledge of such estimates generally, and the reports of engineers, they make an estimate for the outside cost, and the estimates are necessarily only approximate. I am in sympathy with the attitude of the committee in wishing to save to the United States any money in the purchase of these rights of way, and in anything which can be done in that direction I will gladly join.

This cut from the head of Alligator River to either Rose Bay or to the Pungo River lies in Hyde County, which is one of the counties in my congressional district. I know the general nature of the lands and have been over a part of the lands embraced in these proposed alternate routes, either from the head of Alligator River to Rose

Bay, or to Pungo River. With slight exceptions, the lands are swamp lands, unreclaimed, and formerly were regarded as being valuable only for the timber on them. A good deal of the timber has been cut from the lands in that section; to what extent that would apply to the lands along the particular route adopted I can not say; but certainly on part of them, at least, the timber will have been cut away.

Based upon the past experience of the engineers in acquiring rights of way; from may own knowledge of these lands; from the disposition of the people who own lands which would be intersected by the right of way, I believe that the engineers will meet with a friendly disposition and cooperation, and that there will be no disposition to charge any unfair prices. I believe that at least the lands for a part of these rights of way will be donated. I believe that certain interests there, owned by a lumber company, will be donated. And the experience in acquiring lands for dumping has been that the material that is moved hydraulically and spreads out over a large area—I believe there the land will be conveyed at a reasonable price, or an easement will be given for its use at a very reasonable price, and I believe in most instances for nothing.

It is very difficult to estimate what the rights of way for those dumping grounds will cost. I have no idea that they will cost \$154,500, or anything like that; nor do I believe that they will cost half of that. But, as I say, it is difficult to estimate. Personally, I will cooperate, as I have in the past, with the United States district attorney, in whose hands will be placed the acquiring of rights of way, based on maps furnished by the Chief of Engineers' office. And I know from my knowledge of the country and from my knowledge of the people, that I can be of great assistance in expediting the acquisition of the rights of way and in securing them, either by donation or for a most reasonable price.

I have been a member of this committee now for six or seven years, and I do not know of any case where an improvement already adopted has been delayed simply because of differences of opinion as to what rights of way, or other property that would be required in connection with the improvement, would cost. There is an absolute lack of evidence before the committee of any disposition to hold up the Government and charge excessive prices for any of those lands.

Mr. FREAR. Well, is not that statement all argumentative?

Mr. SMALL. I am talking about the facts and the evidence. Pardon me, I would not impose on the courtesy of the committee; I have no disposition to do that.

Mr. FREAR. Well, is not that all argumentative? I would like to hear your statement, if it is not argumentative.

Mr. SMALL. No, it is not argumentative. I am speaking as to the facts, that I know of no improvement that has been held up on the ground that there was any question of what rights of way would cost, or that the Government might be imposed upon. And I think that this improvement ought not to be held up on that ground, but that it ought to be continued.

As to the amount of the appropriation, and speaking as to the facts, the only evidence before the committee, furnished by an engineer on the ground capable of judgment, based upon past experience and present conditions, is to the effect that he can use profitably to the

Government the \$1,000,000 estimated for, for the further continuation of the improvement, including the purchase of rights of way; and therefore it would seem that objections or the reducing of the appropriation based on these grounds would not be justified.

As to the value of the lands, I will say that prior to 10 years ago these lands were regarded as valuable only for the timber on them. But within that time the drainage movement has been initiated in eastern North Carolina, by which many of these swamp lands have been reclaimed. Right in this district, a drainage district has been established containing 110,000 acres, 60,000 acres of which is operated by dike; it could not be operated by gravity, because it has a slight elevation above tidewater; but it would be operated by a dike and pumping. The drainage movement has proceeded so far that where in one place there was a lake that covered 50,000 acres is now dry land; it has proceeded to that extent.

And that has increased the valuation of the land. I am surprised at the approximate accuracy of Col. Jervey as to the value of these lands. I should say in this section that the value of these unimproved lands, bought in large bodies, would be something like \$10 or \$15 an acre—or their approximate value when drained. But we all know that in acquiring a right of way through property, it can not be purchased for the same price proportionately as if you were buying the whole body of land. And I think he is approximately correct. If there was a disposition upon the part of these people for all of them to charge high prices and hold the Government up, why, probably, \$20 to \$30 an acre would not be any exorbitant amount. But that disposition does not exist to my knowledge.

Mr. TAYLOR. The title as held by the lumber people is passed under the new proposition.

Mr. SMALL. I think a good part of it. As to the comments of a member of the committee as to the falling off, I desire to say this: The committee will remember that from Norfolk to Albemarle Sound there were two privately owned canals—the Dismal Swamp Canal and the Chesapeake & Albemarle Canal—which is now a Government canal. Because of the fact that at the time we purchased that canal it had a lesser depth than the Dismal Swamp Canal, and because little improvement is being made, it has not been as attractive as to depth and for navigation purposes as the Dismal Swamp Canal. Therefore until that section of this waterway shall have been purchased the shippers will continue to use the Dismal Swamp Canal, paying tolls. For that reason most of the commerce there continues to pay toll. And I will say that the tolls have been increased by reason of the fact that the Dismal Swamp Canal has taken advantage of this situation.

In spite of that fact, there were 158,446 tons which went through the Government canal last year, with a valuation of \$4,316,776. That is a falling off, as was well said by Mr. Frear. But during the same period of time there was carried through the Dismal Swamp Canal 413,699 tons, with a valuation of \$10,310,650. It must be apparent that the commerce which goes through both these canals must be diverted to this Government waterway, because when this Government waterway from Norfolk to Albemarle Sound is complete, with a projected width of 12 feet, which is the width proposed in the report which we have adopted, it will be free, and all the commerce

will go through that canal and none will go through the Dismal Swamp Canal.

Therefore, it is fair to say there was a total of 572,523 tons of commerce there for the last calendar year, with a total valuation of nearly \$15,000,000. That is only a slight falling off from the figures for the previous year, in the aggregate, and that is due to decrease in the lumber trade. Anybody who lives in a lumber section in the South, or in the West, knows that the demand for lumber greatly fell off in 1915 and is still in that condition. It is owing to the depression in agricultural products and in other things. It will show a greater commerce for 1915 than for 1916. That much in reference to the commerce, which has been heretofore emphasized.

Now, I want to say something in reference to Elizabeth City. Elizabeth City is 18 miles from the mouth of the North River, which is where the Government canal enters Albemarle Sound. The distance from Elizabeth City to Norfolk, by way of the Dismal Swamp Canal, and the distance from a given point in Albemarle Sound to Norfolk is about the same, or only a few miles different. So that the only increased distance from Elizabeth City by way of the Government route to Norfolk is plus 18 miles. But that has nothing to do with the proposition, because there are other towns even farther south.

In reference to the waterway across the mouth of the Pamlico River, it will be about 40 miles from my town. It will pass about 20 miles from Newbern. You can not lay down railroad or a projected waterway to suit the demands of every town; the general demands of commerce must be considered. That has all been thrashed out, and we have adopted that route as a part of the Government waterway.

I have endeavored in the statement I have made to confine myself to a presentation of facts. Later on I will have an argument to make.

Mr. FREAR. Mr. Chairman, I do not want to impose upon the time of the committee, but the gentleman from North Carolina has put this statement into the record, and I would like to make a very brief statement in reply. The statement made by the gentleman from North Carolina seems largely argumentative.

I do not want to be discourteous to the gentleman from North Carolina, who has always treated me with great kindness. On this project I have differed with him with the majority of the committee. I believe that the building of this canal has been a great waste of money on the part of the Government. The canal has been adopted by the board of engineers of the Army, but I think it has been a great waste of money. In that opinion I have been sustained by some men who I believe are the ablest men in the country in their profession. They gave me that encouragement when I began this investigation.

I have lived along this canal, or in that section of the country. I am familiar with Elizabeth City and with the river in reference to which this statement has been made. We have endeavored to ascertain from the map which has been placed before the Army engineer who is present the difference in distance between Elizabeth City and Norfolk by way of the Government canal and by way of the present Dismal Swamp Canal, and it has been ascertained as nearly as can be determined that the distance by way of the Government canal

from Elizabeth City to Norfolk is almost twice as far as the distance by way of the Dismal Swamp Canal. But aside from that fact, all the commerce which originates between Elizabeth City and Norfolk would necessarily have to be abandoned, according to the theory which has just been suggested.

I think one of the most unfortunate conditions which has ever existed has been that wherein the Government of the United States has purposely driven the Dismal Swamp Canal Co. out of business. And I want to say in this connection that I do not know a single member of that company.

In regard to the commerce which is carried in the Government canal, a large portion of that will be shown to be logs and lumber, and the actual merchandise which is carried is small in comparison with the tremendous expenditure of money which the Government is making at this point.

So far as the assurances which have been given us are concerned, as to what the right of way will cost, we know as a matter of practice that they have no value or can be of no protection to the Government.

So I take the same position taken by the gentleman from Missouri, Mr. Booher, in urging that the committee do not make this appropriation until that right of way has been given to the Government.

I renew my expression of friendly feeling for the gentleman from North Carolina and my appreciation of his courtesy.

Mr. SMALL. You have been opposed to the project, as a whole, always, and still are opposed to it?

Mr. FREAR. As a whole; yes.

Mr. SMALL. You would not vote for it under any circumstances, would you?

Mr. FREAR. That is a fair question, Mr. Chairman. I want to be fair in my position. I would not.

The CHAIRMAN. Mr. Watson, of Virginia, is here and wants to ask Col. Jervey some questions in reference to the Appomattox River.

Mr. WATSON. Mr. Chairman, I will be glad to have Col. Jervey make a statement to the committee in reference to that matter.

Col. JERVEY. In October, 1912, an agreement was entered into among the representatives of the Federal Government, the city of Petersburg, Va., and the Norfolk & Western Railway Co., by which the Federal Government agreed to complete certain work connected with the so-called diversion scheme at Petersburg in case certain work connected with the drainage and raising of the streets should be done by the city, and certain work connected with the raising of their tracks should be done by the railroad.

I am now informed by the secretary of the chamber of commerce of the city of Petersburg that the city has made the necessary appropriation to complete its part of the work, and he inclosed with his letter to me a certified copy of the action of the city council in appropriating this money. He also inclosed a letter from the chief engineer of the Norfolk & Western Railway Co., in which the railway states it will start its work as soon as the city work is completed.

The work of the Federal Government and the work of the railroad should go on together, and it seemed to me that in good faith an appropriation to complete its work should be made by the Federal Government, in order that I may be able to start that work sometime next spring, when the railroad will presumably start on its work.

A report on this matter, with an estimate, was sent to the Chief of Engineers by me last spring, and the figures I am going to give you are based on memory, and maybe somewhat in error. As I recall, I then estimated that a total new appropriation of \$38,000 would be required to complete the diversion scheme and to do certain maintenance work in the navigation channel. Of this amount, \$32,000 would be required for the diversion work and the balance of \$6,000 for maintenance.

Since that time the price of labor and material has so markedly increased that that estimate should probably be increased by 25 per cent. So I believe at the present time an appropriation of \$47,500 would be required to complete the diversion scheme and to put the navigation channel in a condition called for by the approved project.

The CHAIRMAN. What was the original cost of that diversion scheme?

Col. JERVEY. The original cost was \$260,000.

The CHAIRMAN. And a dam was constructed?

Col. JERVEY. Yes; in part.

The CHAIRMAN. Is it still there, or was it washed out?

Col. JERVEY. It was nearly all washed out.

The CHAIRMAN. Why was it not protected?

Col. JERVEY. It was only partially completed. Due to the fact that the Norfolk & Western tracks were not raised it affected certain portions of the city and its completion would have caused those portions to be overflowed, and for that reason the dam was not brought up to its full height, and as a result it was topped by the first flood that came along and was largely washed out.

The CHAIRMAN. Was the railroad company under obligation of any kind to protect its property in connection with this work the Government was doing?

Col. JERVEY. In accordance with the terms of the joint agreement, when the city had completed its work it was incumbent upon the railroad to complete its part of the work.

The CHAIRMAN. Was it a part of the arrangement that was made that they were to wait until the Government got through before they would proceed?

Col. JERVEY. It was to wait until the city got through with its work.

The CHAIRMAN. Was the city to wait until the Government got through?

Col. JERVEY. The Government work was the last of the three.

The CHAIRMAN. Why did not the Government do its work before the city did its work?

Col. JERVEY. It did it only in part. It raised this dam only to a height which would not flood the city. If the dam had been raised to the full height before the tracks were brought up, the flood would have gone around.

The CHAIRMAN. That was not a part of the original scheme—you did not take that into account?

Col. JERVEY. Yes; the whole thing was considered together.

The CHAIRMAN. But if you considered that, you would have waited until the city did its work before you would raise it?

Col. JERVEY. Yes, sir.

The CHAIRMAN. Why did not the city do it?

Col. JERVEY. I suppose there was a lack of funds. We have been waiting now for four years.

The CHAIRMAN. Then the nonaction of the city has cost the Government a good deal of money?

Col. JERVEY. Yes, it has involved an extra expenditure. That could hardly be attributed to the city as a fault. There was a flood, and the Government took its chances in raising the dam to a certain height, in the hope that it would protect the harbor from silting, at least in part.

The CHAIRMAN. But it seems as though the primary cause of this was the nonaction of the city. Either the Government engineers were to blame in doing the work, or the city was to blame.

Col. JERVEY. I think it was a matter of taking chances. The harbor had been dredged out, and to prevent the deposit of silt in that harbor from ordinary floods, this dam was raised to a certain height. Instead of an ordinary flood there was an extraordinary flood, which only occurs, of course, at long intervals.

The CHAIRMAN. When you construct a dam, do you not take into account the possibility of extraordinary floods?

Col. JERVEY. The completed height of the dam does take that into account.

Mr. WATSON. Mr. Chairman, I can only add this to what Col. Jervcy has said: The trouble of which he has spoken originated between the city authorities and the railroad authorities, not only of the Norfolk & Western Railway Co., but also the Atlantic Coast Line, the latter road also being involved in the transaction. On account of some question in regard to being ordered by the city authorities to change the location of its tracks, the Atlantic Coast Line Railroad Co. got at loggerheads with the city council. The Norfolk & Western sort of sympathized with the Coast Line, and there grew up a controversy between the railroads and the city. That controversy was pending while the Government was going on with its work. My information is that the Government engineers thought it was safe for them to partially complete the dam, notwithstanding the nonaction of the city and the railroad company. I have no doubt they acted in good faith, so far as securing protection against the ordinary occurrences of nature was concerned.

But there occurred an almost unprecedented flood. I am told the water rose at the Norfolk & Western depot within 4 inches of the height of the Johnstown flood.

The CHAIRMAN. There was a controversy between the city and the railroads which resulted in an innocent third party—in this case the Government of the United States—being punished. Now we are called upon to appropriate \$47,000 for that work because of the difficulty between those parties.

Mr. WATSON. I want to correct you on one point, Mr. Chairman. We are not asking for that much, because the money for the dam will not be required, and that will make a difference of \$16,000.

The CHAIRMAN. Then the amount is \$47,000 less \$16,000. What guaranty have we that the city and the railroads will not get at loggerheads again?

Mr. WATSON. I would like you to put in the bill a provision that the Government must be secured against a loss because of such a

condition. That difficulty between the city council and the railroads has been adjusted and there will not be any more trouble on that score.

Mr. SMALL. What is the revised estimate of cost?

Col. JERVEY. The revised estimate is \$47,500. I think Col. New-comer is prepared to give you the details in regard to that.

STATEMENT OF HON. HENRY A. COOPER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN.

Mr. COOPER. Mr. Chairman, I wish to ask for a survey for Kenosha Harbor, in Wisconsin. The business done there last year, according to the Engineer's report, was nearly \$8,000,000.

This harbor is on Lake Michigan, about 50 miles north of Chicago, between Chicago and Milwaukee. It is, as the figures show, a very important manufacturing center, and growing to be more so every year. It has had an extraordinary growth since the last census. It has some of the largest factories of their respective kinds in the world. The Simmons brass bed is made there, and that company has agencies all over the world. That is a great establishment. Then the Jeffrey automobile works are located there, and there is a large netting works run by the Coopers, who are not related to me in any way. They employ a great number of people. There is also located at Kenosha the Chicago Brass Works, and a number of other large manufacturing concerns.

They have had the same trouble there, although not quite so acute as all the other lake harbors have had, as a result of running parallel piers into the lake, in that when the water is chopped up by the northeast storms it is forced up against the south pier, making it dangerous for vessels in the harbor. There is an inner basin there with a depth of 20 feet which is provided for by the plan. Congress has heretofore appropriated for a breakwater, and then for an extension of the breakwater east, on a line running with the harbor shore, to stop the effect of the northeast storms in the harbor. That has done some good.

The Chief of Engineers says in his report:

The extension of the breakwater has somewhat diminished the disturbances in the harbor through storms. It is believed that the project has a considerable effect in controlling freight rates not only on coal for local consumption, brought in by way of the harbor, but also by affording Kenosha rail rates accorded places at which water competition exists.

I notice in the reports of the business done that brass castings amount to \$1,735,000; hard and soft coal, \$95,480; fish, fruit, lumber, package freight, \$2,736,700; potatoes and wire, \$16,380. The language of the report to which I wish particularly to direct your attention is this: "The extension of the breakwater has somewhat diminished the disturbances in the harbor through storms." To make the harbor what it ought to be, considering the great growth of the city—and it is going to be one of the great manufacturing towns of that section of the country—there ought to be something devised by which ships can tie up in there and not be pounded around by the storms.

The CHAIRMAN. You think a survey ought to be granted?

Mr. COOPER. Yes; I do.

(Thereupon the committee adjourned.)

1

2

3

4

5

6

7

8

9

10

11

12

13

OHIO RIVER AT CAIRO, ILLINOIS

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF THE OHIO RIVER AT CAIRO, ILL.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRE, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 22 AND FEBRUARY 5, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

OHIO RIVER AT CAIRO, ILL.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 22, 1918.

The committee this day met, at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will please come to order. Mr. Denison is here this morning and wishes to be heard on the situation at Cairo, Ill., near the mouth of the Ohio River.

STATEMENT OF HON. EDWARD E. DENISON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS.

Mr. DENISON. Mr. Chairman and gentlemen of the committee, I appear for the same purpose that I came before your committee briefly last year—to get an appropriation to do the work on the Ohio River just above the city of Cairo. I have put a plat up here on the board, which shows the Ohio, running along the curve here [indicating] and the Mississippi coming in on the other side of Cairo, particularly for the purpose of showing the committee what is happening there in the narrow neck of land above the city limits, between the Ohio and Mississippi Rivers.

Mr. SWITZER. How far is it across there?

Mr. DENISON. It is about half a mile, and below that is a city of 20,000 to 25,000 people. Now, of course, this is not a new situation to the committee, and I don't know whether the committee will continue to adopt the same view of the situation as they have seemed to take heretofore; but it is a matter of such urgent importance to the people there that I felt like it was my duty to come before the committee and if we could not get some relief. In fact, we will have to have relief from Congress sometime, and if it is not given before long it will not do any good; and I want to impress that upon the committee, because it is a problem that is going to come up. I say that Congress is going to have to act on this for this reason: I assume that it is a matter of such a nature that it will require the attention of Congress because there is a city, practically 75 years old, a city of 20,000 to 25,000 people, whose absolute destruction is involved, in my judgment and in the judgment of the people living there; and that is of sufficient interest to justify Congress in taking hold of the matter. It is not merely a private matter.

The CHAIRMAN. Mr. Denison, may I suggest that you state the situation somewhat fully. As the hearing, at which you were present, that we had before on the situation at Cairo was not printed, the committee has not had an opportunity to refer to it; but to-day we

have a stenographer here. I may say this, further, that I don't know what the committee can do, but you can be assured that we are in sympathy with you, as we are with any representative who brings a situation to the committee which he thinks requires action; so I suggest you state the matter very fully, so that the committee may see exactly what the situation is.

Mr. DENISON. I shall be very glad to do so.

As I was saying, I think this is a situation which Congress is bound to take hold of sooner or later, and, as I was saying before, it is not merely a matter in which private interests are involved, but it is of such a nature that it justifies the attention and assistance of Congress. Congress recognized that fact a few years ago. It has been only a few years back when there was put through Congress an appropriation of \$250,000 in money in order to help raise the levee. That was appropriated by Congress; a like amount was appropriated by the State; and a similar amount was raised by the people. Congress recognized that there is a public interest there that justifies the assistance of Congress; and I assume that it is of such importance that this committee will recognize that the Congress is justified in appropriating public funds for that purpose.

I have said that the time is coming when Congress is going to have to give assistance there; and I base that upon the further reason that it is absolutely impossible for the people themselves to do what is necessary down there. If it could be done, we would do it, for the people of that part of the country have been willing to do everything they could for themselves, and have always done it. But a situation has developed there that is out of their reach. There is only one thing, in my judgment, and in the judgment of the people who live there and also in the judgment of the engineers, that can be done, and that is to mattress the banks of the Ohio River just above the city. Private individuals can not do that. The State can not do it. No one can do it except the Government which has the mattressing machinery and the necessary equipment.

Mr. KENNEDY. How far is that from the mouth of the Ohio River?

Mr. DENISON. I would judge it to be about, from the extreme point down here [indicating on plat], about 2 or 2½ miles.

Mr. KENNEDY. Does not the flood control bill give jurisdiction to the Mississippi River Commission for flood purposes up the Ohio River above the point you indicate?

Mr. DENISON. I would state to the committee that I have been working on the matter since I have been a Member of Congress as best I could; and there was some question as to whether the Mississippi River Commission had jurisdiction to go up the Ohio River. I went before the Senate committee two sessions ago and got an amendment to the bill, extending the jurisdiction of the Mississippi River Commission up the Ohio River to the mouth of Cache Creek, which is about 4 or 5 miles, for the express purpose of getting this work done. I took the matter up with Gen. Black and Col. Newcomer, and they went before the Senate committee and filed letters recommending that the jurisdiction of the Mississippi River Commission be extended up the Ohio River that distance for the very purpose of looking into this situation and doing this work. So the Mississippi River Commission's jurisdiction has been extended up

the Ohio River to the mouth of Cache Creek, so that the Mississippi River Commission now has power to do the work, but they won't do it.

The CHAIRMAN. The jurisdiction of the commission was extended how far?

Mr. DENISON. The jurisdiction of the Mississippi River Commission was extended up to Cache Creek.

Mr. BOOHER. What reason does the commission give for not doing the work?

Mr. DENISON. The people of Cairo have gone before the commission each year since the jurisdiction was extended, and they have gone up there, making the trip up there to have a look at it; and what they said, in substance, was that all their funds were needed elsewhere.

I want to discuss the physical condition first. As a matter of law, the Mississippi River Commission has jurisdiction to do the work, and they also have the equipment to do it; but, in my judgment, they will not do so until Congress takes some action directing them to do so by specific appropriation of some kind. It will be useless to have given them jurisdiction to do this work if they continue year after year refusing to do it.

Mr. BOOHER. What is the estimated cost of revetting that bank?

Mr. DENISON. Of course the committee is informed, I believe, about what it will cost to mattress it per mile, and I think there should be 2 miles of the bank matted, at least, because it is changing its course constantly.

Mr. BOOHER. Where is it eating the bank away most?

Mr. DENISON. At this narrow place just above the city [indicating on plat]. A number of years ago, before my time, when Congressman Smith represented this district, the people up here at Mound City, about 6 miles above Cairo, were clamoring for a deeper harbor on their side of the river. That is in Illinois, about 6 miles above Cairo. In response to that, and in order to give them a deeper harbor, the Government went over on the Kentucky side and built a stone dike, in order to force the current of the river over on the Illinois side and sweep out a deeper channel in front of Mound City. They accomplish that, but it did too much. It threw the current this way from that time on, and the current has been gradually forcing itself over on the Illinois side, until it has now washed away all the land up to the base of the levee down here in this sweep of the river [indicating on the plat]. The citizens told me there that at that time there were country roads outside the levee, and woods, and also quite a good deal of land all along here [indicating]. Now it has all entirely disappeared, and the current is sweeping right alone the base of the levee. It is getting more and more hazardous each year. It is pointed out by the engineers that in this narrow place just above the city there is a substratum of sand, and there is no way by which that can be remedied except by mattressing.

Mr. BOOHER. That is the same as the engineers call revetment, isn't it?

Mr. DENISON. I think it is. I call it mattressing. They put in willow mattresses along the bank of the stream.

Mr. BOOHER. That is what the engineers call revetment.

Mr. DENISON. Right in here [indicating on plat] is a substratum of sand running across the narrow land to the Mississippi River, and the people there fear that if this levee breaks and the river sweeps over there it will wipe out this city, absolutely destroy it.

Mr. BOOHER. Where is the city—on the map?

Mr. DENISON. Down here [indicating].

Mr. BOOHER. Where is the danger?

Mr. DENISON. Right here [indicating on plat] in this narrow neck above the city. It is only a short distance—you can see across there.

The CHAIRMAN. On the Mississippi side?

Mr. DENISON. On the Mississippi side; yes. If that breaks through, which it will do if something is not done, it will open the channel there and will not only destroy the city, put it on an island, but will interfere with navigation. Thus it is important to have something done about it. The people there are entitled to have something done. My idea is that Congress, if it is going to do anything, should do it now, when it can do it with comparatively little expense. I do not think there can be any doubt about this matter. Engineers have examined the situation, and they will tell you that sooner or later something is bound to come. If we are going to save the city of Cairo, it is right up to us now to do something.

There is another thing I want to mention to the committee. A number of years ago, when the Big Four wanted to go into Cairo, they got permission to run their track on the public levee along the Ohio River, and the railroad now runs in on top of the levee. When they were granted that privilege of using that levee they entered into a contract, which is recorded, guaranteeing that they would maintain the levee to the height that it was then established. That is the sum and substance of their contract. They have not only done that, but, as the floods in the river have increased in the last few years until it became necessary to raise the levee several feet all along there, the railroad company has complied, not only with the letter of the contract, but with the spirit of it, and have maintained that levee and also raised the levee a number of feet higher than their original contract called for. In other words, they have kept the levee up to the height that conditions made necessary, notwithstanding their contract only required them to maintain it at the height at which it was then established. That is the way I remember the contract.

Mr. BOOHER. Did their contract require them to keep the levee at its present height. It did not provide for the maintenance of the levee there, did it?

Mr. DENISON. It provided for maintaining the levee at the height at which it was then established, as I remember it.

Mr. BOOHER. Don't you think the court would give that liberal construction and hold that it was their duty to maintain the levee as the conditions of the river required?

Mr. DENISON. I do not think the contract would be given that construction in the courts, if it ever got there; but, whether it would or not, they have done that voluntarily. Whenever this matter has been brought to the attention of the Mississippi River Commission, they have refused to handle it, or touch it, on the ground, as they say, it is a railroad proposition; and they have contended that because the railroad's contract requires them to maintain the levee at

this height, that that means that they are to protect the levee from encroachments of the river. No court in the country would ever say that. The contract to maintain the levee at a certain height would not be construed into a contract to maintain the levee entirely against encroachments of the river. It is not even the spirit or the intention of the contract that they should do that, yet they have done it. They, however, can not do this work. They have not the machinery to do it. It is impossible for them to do it even if they were willing to do so.

Mr. BOOHER. The Burlington Railroad, through Missouri and Iowa, revetted a great many miles of the banks of the Missouri River. It runs hundreds of miles along that river, and they have matted it.

Mr. DENISON. They have matted it?

Mr. BOOHER. Yes, sir.

Mr. DENISON. The Big Four Railroad say they can not do it because, in the first place, they have not any machinery to do it with. It requires special equipment. At any rate, gentlemen, here is a proposition, which Congress has recognized, to protect these people to some extent, and not permit this situation to go ahead and destroy the city merely because the railroad will not or can not do the work. I do not think the time has come yet when our railroads should be considered outlaws, and that relief should be denied a city or the people around a city on the ground that it might benefit a railroad company. A railroad is recognized as a lawful person in this country and is not an outlaw, and I do not see why relief should be denied the people simply because it may protect a railroad also.

Now, that is the view of the Mississippi River Commission. I do not care anything at all about the railroad company. I do not know a single official connected with it. I am interested in the people of Cairo and the people in that fertile country just above Cairo, and I am coming to the committee for relief for them, because I do not know of any other way to get relief.

Mr. DUPRÉ. Do you think you have come to the right committee?

Mr. DENISON. I think I have.

Mr. DUPRÉ. Was not a law passed that authorized the expenditure of a certain amount, up to \$10,000,000, by the Mississippi River Commission from the Head of the Passes up to this place?

Mr. DENISON. For flood protection.

Mr. DUPRÉ. Yes.

Mr. DENISON. Yes.

Mr. DUPRÉ. When that appropriation is made, it will be carried in the sundry civil bill; so, why don't you insert an amendment including that improvement in the funds carried in that bill? I merely throw that out as a suggestion to you.

Mr. DENISON. You mean direct the Mississippi River Commission to do the work?

Mr. DUPRÉ. Yes.

Mr. DENISON. That is why I came before your committee.

Mr. DUPRÉ. I make that suggestion because that is the committee to go to, I think; and the Appropriations Committee will report the bill to the House that will carry the appropriations for the Mississippi River Commission.

Mr. DENISON. Doesn't this committee make appropriations for the protection of places of this kind?

Mr. DUPRÉ. I do not understand that there will be any appropriation that will be expended by or under the Mississippi River Commission. Am I correct in that or am I making it too broad?

Mr. DENISON. I have not so understood it. I understand this committee has power to direct this commission.

Mr. SWITZER. It had, before.

Mr. DENISON. I don't care what is done with the Mississippi River Commission. I don't care whether this work is done by the commission or by the Engineers of the Army, but I am saying that this work ought to be done, and I have come before this committee for relief. With a couple of hundred thousand dollars appropriated for this work, the people of Cairo will get the relief which they need so badly. A year or so ago we went before the Mississippi River Commission after the flood bill had been passed, and they had the power under that bill to do this work, and the answer was that all the funds had been allotted elsewhere. The Mississippi River Commission is taking the money that is appropriated and building levees down in rural districts to protect the farm lands from floods, and it will not pay any attention to an important situation of this kind where a city of 20,000 or 25,000 people and enormous manufacturing interests are involved. The only reason I can find, or the only reason I have been able to get, for this position is that there is a railroad on the levee.

I think there is an obligation on the Government to take care of this situation, because my information is that it was the action of the Government that has caused this situation—the construction of this dyke here on the Ohio side—which has caused the changing of the current and the gradual eating away of the land on the Illinois side. This bed of the river is right at the foot of the levee. The railroad company has been driving in piling there. That is as far as they can go, and they are spending thousands of dollars. That is as much as they can do, but that will not protect it. When the floods come in the spring, it eats down to where the sand is, and the only thing that will stop it is matressing.

Mr. TAYLOR. Have you said what is the probable cost of this work?

Mr. DENISON. I have stated in a general way. The price of revetment is about \$50,000 a mile, or, maybe, on account of the present unusual conditions, it will cost more. I think there ought to be expended a couple of hundred thousand dollars there, to save this land right above the city of Cairo. That is a matter, the cost, that can be ascertained by asking the engineers. I do not know what it will cost per mile to matress it.

Mr. SWITZER. Mr. Denison, a few years ago I assisted Mr. Collier to get a similar piece of work done at Vicksburg under the Mississippi River Commission. I am interested in directing this Mississippi River Commission to settle this matter here, but I do not know, as to the points raised by Mr. Dupré, whether we still have any jurisdiction over this commission or not. I hardly think we do, but I am not sure of it.

Mr. DENISON. I think you will find, if you will look into the question, that this committee has power to direct the Mississippi River

Commission to make a specific expenditure, if you make a specific appropriation for it. I am constrained to believe that we are not going to get any help from the Mississippi River Commission unless they have specific direction. I do not see why Congress hasn't sufficient authority to do that.

Mr. DUPRÉ. Have you ever conferred with Representative Fisher, of Memphis, regarding Mud Island?

Mr. DENISON. No, sir. I know this committee has done it, as Congressman Switzer says, at Vicksburg, and this is a problem that must be solved in the same way.

Mr. BOOHER. Have you a copy of the contract entered into by the railroad for the use of the levee?

Mr. DENISON. I haven't it now. I brought it over to the committee a year ago.

Mr. BOOHER. It was not printed. I wish you had it. There is a wide difference between your statement of what that contract shows and what Col. Townsend says it shows.

Mr. DENISON. Col. Townsend was very hostile to doing anything there at Cairo, because he maintained it was for the railroad to do it, and when I was shown his letter which he wrote to Col. Newcomer the Colonel asked me to let him see the contract, last year. I got it and took it to the Colonel. My recollection is that he came to the conclusion that Col. Townsend was taking an entirely wrong view of it, and he, if my memory serves me right, said he addressed a communication to him asking him to look into this matter.

Mr. BOOHER. As bearing on this matter, let me at this point read into the record a letter written by Col. Townsend to the Mississippi River Commission.

(The letter referred to is as follows:)

WAR DEPARTMENT,
MISSISSIPPI RIVER COMMISSION,
St. Louis, Mo., December 22, 1916.

From: The president Mississippi River Commission.

To: The Chief of Engineers, United States Army, Washington, D. C.

Subject: Conditions at Cairo.

1. Replying to E. D. letter of December 19, 1916, in reference to the situation at Cairo, Ill., I have to state that I have been reliably informed that permit was granted by the city of Cairo to the C., C., C. & St. L. Ry. Co. to enter the town, but it was specifically stated in the document that not only was the levee to be maintained to a specified height but that it was to be protected from the erosion of the river. As the height to which the levee was to be built was specified, and it is now proposed to increase that height, there may be some question as to the responsibility of the railroad for further levee enlargement, but there appears to be none as to their liability to protect the levee from river encroachment.

2. The conditions do not differ materially from those of railroads along the banks of the Ohio at other localities, or along the Mississippi, Missouri, or other streams.

C. McD. TOWNSEND,
Colonel, Corps of Engineers.

Mr. DUPRÉ. Who is that?

Mr. BOOHER. Col. Townsend. He makes that statement in regard to that situation. He states that it was specifically provided in the document that not only was the levee to be maintained at a specified height, but that it was to be protected from the erosion of the river; and that, as the height to which the levee was to be built was specified, and as it was proposed to increase that height, there may be some

question as to the responsibility of the railroad for further levee enlargement, but there appears to be none as to their liability to protect the levee from the river encroachment.

Mr. DENISON. Exactly.

Mr. BOOHER. And then he goes on to say that the conditions do not differ materially from those of railroads along the banks of the Ohio at other localities, or along the Mississippi, the Missouri, or other streams.

Mr. DENISON. I filed that letter last year myself. In response to that letter I came before this committee and also went before Col. Newcomer, of the Engineers, and showed them the contract, and showed them that Col. Townsend was absolutely wrong and was acting upon a rumor instead of upon proper information. Col. Townsend has always been prejudiced against the people of Cairo. In that matter he acted upon a rumor, or upon wrong information.

Mr. BOOHER. I should like to know if you have asked the people down there for a contribution.

Mr. DENISON. Pardon?

Mr. BOOHER. Have the people down there been asked to contribute anything to this work?

Mr. DENISON. No, sir. He never would get that far. He simply assumed the position that it was work for the railroad.

Now, let me tell the committee briefly what mislead Col. Townsend. Back many years ago, when the railroad company came in there, there was a certain portion of this land that was deeded in fee to the railroad, outside of the levee. That was deeded outright to them. They bought it. Upon that land there were other interests located, and that conveyance provided that they should maintain the bank of the river—I mean, protect the bank of the river—upon that particular land that was deeded to them.

Mr. BOOHER. That is, that the railroad should maintain it?

Mr. DENISON. Yes. That applied to the land they had bought, the land that was deeded to them in fee. That land was owned by them in fee, but that was comparatively a small tract of land down here [indicating on plat] above the city, and that belongs to the railroad company in fee. That is not the land I am interested in. Because that small tract of land that was deeded to the railroad company had that provision in the deed, Col. Townsend jumped to the conclusion that it required them to maintain the levee on all the property above there.

Mr. BOOHER. The contract does require them to maintain the levee along there that they own?

Mr. DENISON. The contract requires the railroad company to protect the levee on the land that they own, but that is not where the danger is. Besides, the railroad company has conveyed that land away, where it has not been washed away by the river.

The CHAIRMAN. All this revetment or matressing or protection work to which you are calling the attention of the committee is on the Mississippi River side?

Mr. DENISON. It is on the Ohio side.

The CHAIRMAN. That is where I misunderstood you. It is all on the Ohio?

Mr. DENISON. Yes, sir.

The CHAIRMAN. And none on the Mississippi?

Mr. DENISON. No; they have levee protection over on the Mississippi River, and the current is not eating toward the Ohio River on that side. It is only on the Ohio River, where this bulge in the Ohio is, that the river is eating its way into the levee.

The CHAIRMAN. Is that protection work on the Mississippi River side in the vicinity of Cairo maintained by the Mississippi River Commission?

Mr. DENISON. It is maintained by the people there with the aid of the Government. I do not know who does it exactly.

The CHAIRMAN. You are not sure whether the maintenance is under the jurisdiction of the Mississippi River Commission or not?

Mr. DENISON. No.

Mr. KENNEDY. The levee work up to Cape Girardeau would be under the Mississippi River Commission; their jurisdiction over channel work runs up only as far as Cairo.

The CHAIRMAN. Under the flood-control act?

Mr. KENNEDY. Under the Mississippi River Commission act.

The CHAIRMAN. I will call the attention of the committee to this, because it seems to me to be interesting: In the rivers and harbors act of July 27, 1916, in the paragraph making appropriations for the Mississippi River Commission, there is this language:

Provided further, That the water courses connected with said river and the harbors upon it, now under the control of the Mississippi River Commission and under improvement, together with the harbor at Vicksburg, Miss., and the Ohio River from its mouth to the mouth of the Cache River, which are hereby transferred to and placed under the control and jurisdiction of such commission, may, in the discretion of said commission, upon approval by the Chief of Engineers, receive allotments for improvements now under way or hereafter to be undertaken, to be paid for from the amount herein appropriated.

Now, the flood-control act, which was approved March 1, 1917, fixing the jurisdiction of the commission on the Mississippi River, and its tributaries, has this language:

That for controlling the floods of the Mississippi River and continuing its improvement from the Head of the Passes to the mouth of the Ohio River the Secretary of War is hereby empowered, authorized, and directed to carry on continuously, by hired labor or otherwise, the plans of the Mississippi River Commission heretofore or hereafter adopted, to be paid for as appropriations may from time to time be made by law, not to exceed in the aggregate \$45,000,000; *Provided*, That not more than \$10,000,000 shall be expended therefor during any one fiscal year.

While the paragraph following subdivision "d" of section 1 contains this language:

That the watercourses connected with the Mississippi River to such extent as may be necessary to exclude the flood waters from the upper limits of any delta basin, together with the Ohio River from its mouth to the mouth of the Cache River, may, in the discretion of said commission, receive allotments for improvements now under way or hereafter to be undertaken, etc.

Mr. DENISON. I know.

The CHAIRMAN. So the question that occurs now is, as Mr. Dupré suggested, whether this committee would have jurisdiction to consider any legislation commanding the Mississippi River Commission to do certain work upon the Ohio River between its mouth and the Cache River, and making an appropriation therefor which was exclusively for flood control or bank protection and not for navigation.

I believe that any Member who comes before the committee on a serious proposition, such as you are presenting, is entitled not only to a hearing but to sympathetic consideration; but I just place that query before you as to the jurisdiction of the committee for consideration.

Mr. DENISON. I appreciate that situation, and I have understood that you have that jurisdiction. I would not place it, Mr. Chairman, exclusively upon a proposition of flood control. I think there is an interest of navigation involved. The question is, what effect will it have upon navigation if this river breaks through here to the Mississippi River and partially changes its course. I think there is a broader question involved than the mere question of flood control. It is a very important question to the people of Cairo; it is a question of having their city swept away or isolated on an island. I think it will interfere to some extent with navigation when the river changes and divides up into two lesser streams, which it is going to do sooner or later.

Mr. BOOHER. What is the distance across there?

Mr. DENISON. About half a mile, and the city is below it. All along the river, right inside the levee here [indicating on plat], there are a lot of important industries—mills and manufacturing plants—which are working like beehives now, or were until they were stopped by the Fuel Administrator. It is one of the most fertile farming districts in the State of Illinois, right down here in this district, all protected by this levee.

As I said, this committee appropriated—and I guess there are some members of the committee who remember it—\$250,000 several years ago that has been expended here.

Mr. KENNEDY. It has not been since I was a member.

Mr. SWITZER. It was spent in building the levee.

Mr. KENNEDY. I thought that amount was to revet the bank.

Mr. DENISON. No; it was to raise the levee. They got a specific appropriation for \$250,000 to raise the levee. Now, why can not you make an appropriation of \$200,000 to revet the levee? The people have gone to tremendous expense down here. The people of Cairo have not been calling upon the Government very much. They are a sacrificing people. They have been working long years on this levee; they have been working and doing everything they could to save themselves from this condition. They have a prosperous city there with a great many manufacturing plants. Now, it is a proposition to save this levee. They have levied as much by taxation as they can levy under the laws of the State—you know there is a constitutional limit to the amount of taxes they can levy.

Mr. KENNEDY. By the municipality?

Mr. DENISON. Yes, sir. They have taxed themselves to the limit to raise the levee and broaden it, and it is absolutely impossible for them to do this work. The levee is there; they can not move it. They can not move this tremendous levee now, which has been built up there for years and years; in order to move it back, they must buy the land on which these factories are located. They could not do that. They have maintained this levee there for a number of years and to move it would be out of the question; they could not do it.

Mr. KENNEDY. Couldn't they mattress the bank to protect their own property?

Mr. DENISON. How?

Mr. KENNEDY. They could hire it done.

Mr. DENISON. Whom could they hire to do it? There is no equipment down there except that which the Mississippi River Commission has. The railroad company could not and would not do it. The people can not sit back and wait for the railroad to do it. The people's homes are involved; their interests are involved; their lives are involved.. I was in Cairo at the last flood, and I know that the old men, and nearly every child and every woman that could do so left the city, and all the able-bodied men were patrolling the levee, piling up sand to keep the city from being washed away. It is a terrible situation. They can not keep the river from changing its course. Congress is the only body that can do that.

The CHAIRMAN. What railroad is that?

Mr. DENISON. Which?

The CHAIRMAN. What railroad is your city located on?

Mr. DENISON. On the Big Four Railroad.

The CHAIRMAN. Is that a part of the Illinois Central?

Mr. DENISON. I think not.

Mr. DENTON. It is a part of the New York Central.

Mr. DENISON. I suppose it is a part of the New York Central.

Mr. EMERSON. What do they represent on the map [indicating lines on plat]?

Mr. DENISON. Those are sections.

Mr. EMERSON. How high is the land above the city, above the usual height of the river?

Mr. DENISON. I do not know how high it is above the usual height.

Mr. EMERSON. Well, the average height.

Mr. DENISON. It is just a little bit higher. When it is in flood it is a number of feet lower. All this is all protected by the levees.

Mr. EMERSON. Is it all below the river when it is high?

Mr. DENISON. Yes.

Mr. FREAR. When I was down there my recollection is that it was all flooded up there. Doesn't that overflow?

Mr. DENISON. Yes, sir. It breaks over. The last time it broke over there the houses were washed away. It only broke over the top of the levee, and they quickly fixed it up. There is now a washing away of the sand below the levee, and that will mean disaster to this city sooner or later. The only way to prevent it is by mattressing.

Mr. FREAR. Has your city ever considered bringing an action against the railroad company to see whether or not there was any liability on the part of the railroad to maintain this levee?

Mr. DENISON. No, sir. As the contract was construed by the attorneys there was no possible way to make the railroad company stop the river from changing its course.

Mr. KENNEDY. When the appropriation of \$250,000 was made, of which you speak, it was considered that an extraordinary emergency existed; and it was provided that the city of Cairo should expend, or cause to be expended, the same amount for the same purpose.

Mr. DENISON. Yes, sir; that is right. Congress appropriated \$250,000.

The CHAIRMAN. I understood you to say that that provision in the appropriation act of 1912 was carried out. Is that right?

Mr. DENISON. Oh, yes. They raised the levees to where there is no longer any danger from the levees themselves. I have not come to you to ask you to raise the levees. We will take care of the levees. What I am asking Congress to do is to protect us from the erosion of the river, which will destroy the levees if some action is not taken to prevent it.

The CHAIRMAN. What would be the effect upon the city of Cairo and the rich agricultural lands lying above, if the Ohio River should go through that section about half a mile wide between the Ohio and the Mississippi Rivers?

Mr. DENISON. My judgment is that it would absolutely destroy the city.

Mr. SWITZER. If it put it on an island they could bridge their way to the city.

Mr. DENISON. They would have to bridge it if they came into the city. I have been in Cairo when there was water for miles on every side of the city, and several feet higher than the level of the city.

The CHAIRMAN. What would be the effect of that upon the people there, if the levees should be washed out?

Mr. DENISON. The city would be swept away.

Mr. BOOHER. The people of Cairo spent the appropriation under the act of 1912?

Mr. DENISON. Yes, sir; the people of Cairo raised their proportion, and the State did, too.

Mr. FREAR. Did the Big Four contribute anything?

Mr. DENISON. Yes, sir. The Big Four has not been in good financial condition, and they have not done anything more than they had to. The Government has taken over this Big Four Railroad, and it is no longer a private concern. It is in the hands of the Government. If you are going to consider this railroad proposition at all, and if we are going to do what the President has asked us to do—guarantee the return of the railroads to their owners in as good condition as they were received—then the Government would be justified in making this expenditure, notwithstanding the railroad is there. It is a Government-controlled property now. But I do not let this question of the railroad enter into the consideration at all.

Mr. BOOHER. Mr. Denison, don't you think it would be a good idea to see the Director General of Railroads about that proposition? I think there is something in that proposition.

Mr. DENISON. I will state this, that I do not believe I could see the Director General of Railroads if I wanted to. I have tried to see him, but I could not do it; I could only get some subordinate. He has so many problems to handle that they are absorbing all his time and attention. That is only a secondary question here. I just mentioned it for the purpose of showing the committee that I do not think that Congress or the committee should be quite so fearful that they will do something here that will indirectly benefit the railroad, inasmuch as the railroad is now under the control and operation of the Government.

Mr. TAYLOR. The Big Four could go in there, but they would not want to bridge into the town when there was no town.

Mr. DENISON. No. The railroad company can not protect this levee. It is up to Congress. I wish to make it plain to the committee how the people of Cairo feel about this thing. Their homes are there; their property is involved. They read in the river and harbor bills about appropriations for little rivers down here or over yonder, which have practically no water in them, and yet where we are spending thousands of dollars on those rivers to make them navigable. And yet here is a city of 20,000 or 25,000 people that is liable to be wiped out, and they think it is strange that Congress will not make an appropriation to protect them.

Mr. FREAR. Did the city come forward and offer that contribution or was that asked for by the engineers?

Mr. DENISON. No; the city offered it.

Mr. FREAR. What would be your idea of securing the consent of the city to make a proposition on the same basis as was done before? This money that is held by the Mississippi River Commission is based upon a proportionate contribution by the different localities.

Mr. DENISON. I have taken that matter up with some of the citizens, particularly the mayor; and they say that they understand that the provision about contribution by local authorities has reference to construction of levees; that where you construct levees the local districts will be required to pay one-third and the Government two-thirds; but that provision of the law is not supposed to apply to the protection of the bank by revetment.

Mr. TAYLOR. Suppose Mr. Denison would introduce a bill seeking to amend the law, so that it could be made mandatory in its nature. To what committee would the Speaker refer the bill?

The CHAIRMAN. It is a flood-control proposition.

Mr. KENNEDY. Wasn't it the purpose or the understanding that the Mississippi River Commission should take care of this work?

Mr. DENISON. Yes; it was, but they will not do it. It will take a specific act of Congress. If you will make a specific appropriation, then I have hopes that the War Department and the Engineers will have it done. Col. Newcomer is friendly to this, I think; he sees the merit of it, but he hesitates to say to Gen. Bixby that he must do it. If the committee will make an appropriation he will see that it is done.

The CHAIRMAN. Let me make this suggestion, Mr. Denison: First, I think that any Representative who comes before the committee upon a serious proposition like this is entitled to very full consideration, and he is entitled to aid, or the reasons why the committee can not render any aid: one or the other. May I ask, for the consideration of the committee, that the suggestion be made to Mr. Denison to go before the chairman of the Committee on Flood Control, and before that committee, and present this matter to them at the earliest moment, with a view to obtaining any relief there; and, second, that this committee request its subcommittee—Mr. Booher, Mr. Switzer, and Mr. Dupré—to consider this matter and report to the full committee their conclusions as to what action, if any, ought to be taken by the full committee. That will be making progress. If that committee, instead of making a verbal report, would submit their report in writing, it can be made a part of the record here, and,

in the end, Mr. Denison will not only have the satisfaction of having discharged his duty, but the committee will also have the satisfaction of knowing that it has considered the matter thoroughly, and whatever conclusion is reached is based upon substantial reasons.

Mr. DENISON. I would be very glad if that could be done. I shall be very glad to appear before the Flood Control Committee, but I will state that I do not understand that they make specific appropriations.

The CHAIRMAN. They do not. They legislate. If they want appropriations, they have to go to the Appropriations Committee.

Mr. DUPRÉ. It reverts to what I suggested to you previously—that when, in pursuance of the flood-control act, there would come from the Appropriations Committee the appropriation of \$10,000,000 for the Mississippi River Commission—that there is the time and place for you to consider an amendment providing for the improvement at Cairo. That, however, would be subject to a point of order.

Mr. DENISON. It would be.

The CHAIRMAN. I would suggest, Mr. Dupré, that if the Committee on Appropriations were to attempt to include in appropriation bills any legislation, it would be subject to a point of order.

Mr. DENISON. Besides, the Appropriations Committee could not look into the merits of this proposition.

The CHAIRMAN. This item would be subject to a point of order.

Mr. DENISON. In the Senate it would not.

The CHAIRMAN. They have senatorial courtesy over there.

Mr. DENISON. I do not see how we can get any relief unless we get it from this committee. I want the committee to see the merits of this proposition and give us some relief. I feel as if, as a member of the House, I should get some relief here.

The CHAIRMAN. The committee will take this matter under consideration.

Mr. DENISON. All right, Mr. Chairman.

The CHAIRMAN. If you will bring to the attention of the chairman here any desire for a further hearing, the committee will extend you every courtesy.

Mr. DENISON. Thank you. I can get this contract again and furnish it to the committee or to the subcommittee if you desire it.

The CHAIRMAN. All right.

Mr. DENISON. I thank you, Mr. Chairman, for the opportunity of presenting this matter, which is of so great concern to my people.

The CHAIRMAN. Mr. Denison might wish to know, while he is here, what the committee is going to do. May I assume that there is a motion that this matter be referred to the subcommittee on legislation for consideration?

Mr. OSBORNE. I will make that motion.

Mr. GRAY. I second the motion.

(The motion was carried.)

The CHAIRMAN. The subcommittee on legislation will kindly take up the matter referred to as early as possible.

(Whereupon the committee went into executive session and, at 12 o'clock noon, took a recess until 2.30 o'clock p. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Tuesday, February 5, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

(After concluding hearings on Tenants Harbor and Wills Strait, Me., the committee proceeded to the hearings on the Ohio River at Cairo, Ill.)

The CHAIRMAN. Mr. Denison is here. The committee heard him several days ago regarding conditions at Cairo, on the Ohio River front, but he has requested that he be given another brief opportunity to appear before the committee and expressed the desire that Col. Newcomer should be present. Col. Newcomer is now here, as are also Mr. Booher and Mr. Switzer and Mr. Dupré, who were on a subcommittee which considered the matter concerning which Mr. Denison now desires to be heard.

**STATEMENT OF HON. EDWARD F. DENISON, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF ILLINOIS.**

Mr. DENISON. Mr. Chairman and gentlemen of the committee, when I was here before the committee the other day two questions arose during the presentation of the subject upon which I did not have definite information, and a subcommittee was appointed, upon which those gentlemen named by the chairman were named to look into one of those questions, and since then I have had a very brief conference with Col. Newcomer, of the Corps of Engineers, and while he is here this morning I think it would be well for me to come before the committee again for the purpose of bringing out the two questions referred to.

One of them was the cost of doing the work we want done on the north side of the Ohio River just above Cairo. I asked Col. Newcomer to be here for the purpose of asking him what that cost would be. Col. Newcomer is here this morning, and I think he can give the committee an estimate as to what it would cost per foot, as he has communicated, I understand, with the Mississippi River Commission.

The other question that was asked was, How much work was needed there, or over what distance did the bank need a revetment? In my presentation of the subject the other day I estimated that there ought to be about 2 miles of the bank-protection work done there. I think Col. Newcomer can state to the committee what the Mississippi River Commission thinks. I believe they say there should be about 2½ miles of work done there, but they also state that perhaps 3,000 feet of that kind of work is more urgent, or something to that effect. I will let Col. Newcomer present that.

Mr. DUPRÉ. Will Col. Newcomer be able to tell us why the Mississippi River Commission could not do the work?

Mr. DENISON. I do not know about that. Another question that arose was as to the jurisdiction of this committee to specifically appropriate and direct that this work be done. When I came before the committee I was of the opinion that the committee had that

authority, and I think the Engineer Department has the same opinion. While Col. Newcomer is here I would like to have him give the views of his department as to that question. I understand that the subcommittee composed of Judge Booher and others have taken that matter up and made an investigation. I think, Mr. Chairman and gentlemen, that this committee this year, at least, ought to make a specific appropriation to do what is considered emergently necessary to protect that bank at this time. If only 3,000 feet needs to be taken care of, let it be that amount. When I gave the estimate of 2 miles I meant the amount of work I thought ultimately ought to be done there to protect Cairo and the property above Cairo; but I do think there ought to be enough work done now to take care of places where there is an emergency, and then the other work can be taken care of later, and I mention that for this reason: We have been trying to get this work done for a long time and have been unable to get it done; the river is, at high water, approaching nearer and nearer to the levee, and the very thing is going to happen that was mentioned to me by Col. Newcomer the other day—that is, if this work is not done soon it is going to be impossible to mattress that bank outside of the levee without moving the levee—and I think the moving of this levee along that low stretch of land above Cairo is going to be so expensive as to be prohibitive unless the Government does it all itself. The people have appropriated money to protect these levees until their funds are exhausted, and they can not raise enough money under the laws of the State to move these levees.

Mr. BOOHER. How far is the river from the levee now?

Mr. DENISON. The river has eroded and eaten back until in places it is right at the base of the levee. It can be protected now by mat-tressing so that the levee will not have to be moved. That is what the local engineers, who have made surveys and examinations, tell me, and I think the Mississippi River Commission said that, too; but, of course, if it keeps on working until the bank gets too steep, then I think it can not be mattressed. Now, this is a matter of such importance that delay will absolutely necessitate the moving of the levee if it is not destroyed by the high floods.

Just immediately north of Cairo and along back of this levee, and protected by it, are large factories, any number of them, and if the levee should have to be moved, of course it would necessitate the condemnation of all that expensive property now occupied by factories and other industries, and that would be absolutely prohibitive if there had to be a substantial contribution from local people. Of course, the committee knows that that land nearly back to Mound City is lowland.

Mr. SWITZER. How far is it?

Mr. DENISON. About 6 miles. It is low land which has always been protected by this levee since we have undertaken to protect it from high waters, and it is an expensive proposition to talk about building a new levee and keep the city of Cairo from being isolated; and I think we ought to have a specific appropriation of enough money to do the work where it is most needed right at this time.

Mr. DUPRÉ. Do you think this committee ought to include new projects in this bill?

Mr. DENISON. I do not consider this a new project. The Government has made appropriations for this levee heretofore and Congress has legislated for this project heretofore.

Mr. DUPRÉ. I was not directing my inquiry to this project particularly.

Mr. DENISON. Well, that would depend. If there is a project that is important and that the Government ought to take hold of, I do not think you ought to let any theory stand in the way of doing it. You ought to judge each project on its own merits.

Mr. DUPRÉ. You and I are in accord, then.

Mr. DENISON. But this is not a new project, because Congress has legislated upon this question and has given the Mississippi River Commission jurisdiction to do this work. You have the authority. What we are asking now is a specific appropriation for this work.

Mr. BOOHER. Do you urge that we take the money necessary to do this work out of the appropriation for the Mississippi River Commission?

Mr. DENISON. We do appropriate for them. I am asking that this Congress, through this committee, make a specific appropriation and direct the Mississippi River Commission to do this work, just as you do in other places.

Mr. BOOHER. We appropriate a certain amount of money for the Mississippi River, and that is expended under the jurisdiction of the Mississippi River Commission. This project is under the jurisdiction of the Mississippi River Commission. Why should not the money necessary to fix that up be taken out of the appropriation of the Mississippi River Commission?

Mr. DENISON. That is all right so far as we are concerned; all I want is to have the work done; I do not care where you take the money from.

If the committee will make a similar provision here to that they have made for Memphis I can not help but believe the commission will go ahead and do the work. I think the engineers know this work is needed pretty badly, and I think if the committee will make a specific provision and make it provide enough funds to do the work which is shown to be emergently necessary, we will get it done. I would at least be willing to risk it, and I would be glad if the committee will ask Col. Newcomer while he is here such questions in regard to this matter as they desire.

The CHAIRMAN. The committee will be glad to hear from Col. Newcomer.

STATEMENT OF COL. HENRY C. NEWCOMER, UNITED STATES ARMY, ASSISTANT TO THE CHIEF OF ENGINEERS.

Col. NEWCOMER. Mr. Denison spoke to me the other day inquiring about this matter, and I thought it well to communicate with the president of the Mississippi River Commission, Gen. Bixby, in order to learn something of the situation, so I wired him and received this telegram from him:

Revetment desired by Cairo, Ill., is for protection of levees, which in turn protect railroads and private property. Work is needed more for flood protection than for navigation. Total length caving bank, about 12,000 feet, for which revetment would cost about \$480,000. Perhaps 3,000 feet urgent. Commission

resolution printed in November proceedings directed further examination to be made after next high water and then a report with estimate of cost of adequate revetment and also of new levee along this front.

It appears that the commission, in considering the appeal of Cairo for relief, decided that it should not allot any money out of the last appropriation, which was something under \$6,000,000. They considered it at the time they were making the allotments, and they decided they would call upon their district engineer for a report upon the situation after the high water of this spring season. He was to give them then a statement as to the situation, both for revetment and a possible relocation of the levee line, moving it back and in that way protecting it from the caving bank. Of course I have no information with reference to the urgency of this other than the statement in this telegram that possibly 3,000 feet could be considered urgent. I do not know at what rate the bank has been receding, and I do not know what risk the commission has incurred by postponing it. It would look as though the commission contemplated doing something this coming season at this point. Of course it is said that they have already been contemplating that for some time, and so there is not, possibly, the assurance that the locality would like to have as to the work being undertaken.

I was surprised at the rate of \$40 per linear foot as the cost of the revetment, which is the cost of the work on the lower Mississippi River, where you have high banks and deep water. I had thought that this would approximate more nearly to the upper Mississippi, above Cairo, and the Missouri, where the revetments cost anywhere from \$12 to \$14 and \$18 a foot. But he estimates this at \$40, and that makes the work very expensive. The 3,000 feet would at that rate cost \$120,000.

The CHAIRMAN. That is the revetment work?

Col. NEWCOMER. That is the revetment; yes, sir. Was there any other phase of it that the committee would like to ask about?

Mr. SWITZER. You think, under your construction of the law, that the committee has authority to direct the commission?

Col. NEWCOMER. I think so, entirely.

Mr. SWITZER. And pay for it out of the money appropriated by the Appropriations Committee?

Col. NEWCOMER. Yes, sir.

Mr. BOOHER. If the 3,000 feet would be all that would be necessary now, at \$40 a foot, it would be \$120,000. Do you think that would be enough?

Col. NEWCOMER. I think it is rather rash to determine at this time, because the floods of this season may possibly extend that length.

Mr. BOOHER. If the committee appropriated \$250,000 it would not be necessary for the commission to expend it unless it was necessary to use it?

Col. NEWCOMER. No, sir.

The CHAIRMAN. I was diverted a moment ago when you were asked a question which you answered. Do I understand you to express the opinion, Colonel, that this committee could, by legislation in this bill, direct the commission to do this work and expend the amount out of the regular appropriations which are appropriated for the commission?

Col. NEWCOMER. That is my opinion. It was done this last year, and we are acting under that authority now. We are acting on that theory.

The CHAIRMAN. As to the sand bar in front of Memphis, Tenn.?

Col. NEWCOMER. Yes, sir. The work done by the commission has been handled for years and years under this committee. I understand the proposition of putting it in this other form was largely to put the work on a continuing contract basis, and we are giving the appropriation in the sundry civil bill, as in the case of other continuing contract river and harbor work.

Mr. SWITZER. But they take care of that river improvement?

Col. NEWCOMER. All of the work for navigation, as well as for protection, is being taken care of out of this fund, and that clearly comes within the field of the jurisdiction of this committee.

The CHAIRMAN. The telegram from Gen. Bixby states that this work is necessary primarily for flood control.

Col. NEWCOMER. That is undoubtedly true, just the same as you have done at many points on the Missouri. It is done for the protection of property, but it is a part of the work on the river which has been handled regularly for years in river and harbor bills, but now under the flood control bill and the sundry civil bill.

Mr. FREAR. It is your opinion that we can determine the application to be made of the money?

Col. NEWCOMER. If you wish to do so.

Mr. FREAR. You think the committee has that power?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Has that been the accepted understanding outside of your bureau?

Col. NEWCOMER. I do not know that there is any different understanding. Of course, the Flood Control Committee might take exception to such a radical diversion of the fund as would interfere with the work of that project, but the work has always been done under the guise, at least, of navigation improvement.

Mr. FREAR. Estimates are made of the proposed expenditures, and on this basis \$10,000,000, say, will be appropriated this year in the sundry civil bill. Would it not divert the funds estimated to cover some other project for this committee to interfere in this way?

Col. NEWCOMER. No, sir; the flood control act of March 1, 1917, determines all those matters. That act prescribes the rate at which the work may proceed. In other words, it may not exceed more than \$10,000,000 a year on the Mississippi River, and it includes this stretch of the Ohio in the work to be taken care of by the commission. It is not a new project; this is clearly within the work covered by the flood control act.

Mr. FREAR. It was only the jurisdiction of the committee I had in mind.

Col. NEWCOMER. There is no doubt whatever of the authority of the commission to apply those funds, and, to my mind, there is no question of the authority of the committee to include in this bill an item directing that a portion of the funds should be used at this place.

Mr. FREAR. To determine where the Flood Control Committee should place the funds?

Col. NEWCOMER. The Flood Control Committee does not appropriate at all. The Flood Control Committee introduced this bill, the flood control act, which appropriated no money but directed the work to be prosecuted with funds which should be supplied from time to time.

Mr. FREAR. And recommended the amount?

Col. NEWCOMER. And determined the amount. Then the Appropriations Committee made the appropriation. As a matter of fact, instead of supplying the \$10,000,000 they gave only \$6,000,000, and the estimate has been put in for this coming year for \$10,000,000.

Mr. FREAR. Another element enters into that. The various communities are required to pay one-third of the expenditure for that particular district.

Col. NEWCOMER. That only applies to the work on the levees.

The CHAIRMAN. And the proportion is one-half?

Col. NEWCOMER. It is at least one-third of the total, or one-half of what the Government gives.

Mr. FREAR. If that estimate is made and these communities are expected to pay their proportion under the flood control act, I am wondering whether we can divert any part of the proceeds which were intended to meet the contribution which they made.

Col. NEWCOMER. The actual distribution of the funds is practically never determined in advance of the appropriation. Those communities are standing ready to cooperate in so far as Government funds will permit them to go ahead. That is the general proposition. The Government could spend much more money, so far as the local contributions required by law are concerned, if the Government had the money to expend.

Mr. SWITZER. It is not contemplated that the whole \$10,000,000 will be spent on levees?

Col. NEWCOMER. No; also on revetment and dredging work and other items, which are directly navigation features.

Mr. TAYLOR. You asked Col. Newcomer if Congress had the right to divert the money of the Mississippi River Commission. In the last bill this language is used with reference to Memphis Harbor:

The Mississippi River Commission shall forthwith make an examination at the mouth of Wolf River and at the earliest practicable moment make such plans and take such steps, to be approved by the Chief of Engineers, as will remove the bar.

That seems to be mandatory in its language.

Mr. FREAR. That seems to be an assumption of jurisdiction, if they possess it. Have they done any work under that?

Col. NEWCOMER. Yes; they have been continuously keeping the channel at Memphis clear, by dredging. They have not yet prepared the plans for permanent relief. They will do that as soon as practicable, and we have been expecting a report at almost any time. A couple of weeks ago I was informed it would be made in a few weeks, but we have not received it yet.

The CHAIRMAN. With regard to the jurisdiction of the commission over this section of the Ohio River, I would like to ask a question, and in connection with the query I will quote from the flood control act:

That the watercourses connected with the Mississippi River to such extent as may be necessary to exclude the flood waters from the upper limits of any delta basin, together with the Ohio River from its mouth to the mouth of the Cache River, may, in the discretion of said commission, receive allotments for improvements now under way or hereafter to be undertaken.

The words "in the discretion of the commission," as I understand it, do not differentiate the jurisdiction of the commission as to this part of the Ohio River from any section of the Mississippi River of which they have jurisdiction.

Col. NEWCOMER. I do not understand it so. The whole situation is in their hands and all allotments are made at their discretion as to the most urgent need. I had assumed—and it is a natural assumption—that the commission in allotting funds last year felt that the other needs were more urgent than these. Of course, I am not in a position to judge of the basis for that belief.

The CHAIRMAN. I do not wish to be critical of the commission—certainly I should be familiar with all the facts before doing so—but if this part of the Ohio River is as much under their jurisdiction and they possess the same authority over it as they do over any other part of the Mississippi and other rivers which are under their jurisdiction, and if the situation is as urgent as it is represented to us, particularly by Mr. Denison, who is assuredly entirely sincere, I can not understand why it should be necessary for this committee, or for Congress, to intervene with the commission.

Col. NEWCOMER. I might state, Mr. Chairman, that there was for a time at least the impression, I think, with the commission that there were certain obligations resting upon the railroad which the Government would be assuming if they did the work.

The CHAIRMAN. I would like you to express an opinion about that.

Col. NEWCOMER. When this matter was considered once before, with the view to requiring the expenditure of some of the commission's money, the matter was taken up with Col. Townsend, and he made a report indicating that in his opinion the railroad company was under obligation to maintain this levee line. At that time Mr. Denison furnished the department a copy of the agreement between Cairo and the railroad, and it appeared that the obligation to maintain the bank referred only to a certain portion of land that was transferred from the grantors to the railroad at a somewhat different locality than this farther down the river. There they have a positive obligation to maintain the bank. The obligation elsewhere was simply to maintain the levee; they were to see that that was kept intact. This contract was sent to Col. Townsend and his attention was called to its terms and he was informed that apparently there was no obligation on the railroad torevet the bank here and he was requested to present that matter to the commission. I judge that the commission is now well informed on that proposition and that it has refrained from allotting the money during the past season because it has felt that the funds were more needed elsewhere.

The CHAIRMAN. If I understand you, the interpretation by the department of this agreement between the railroad company and the city of Cairo does not apply to revetments, but only to levee work.

Col. NEWCOMER. At this portion of the line.

The CHAIRMAN. To what portion of the levee work does it apply, if you are informed?

Col. NEWCOMER. The entire levee, which it occupies, it was to keep up. Of course that means that the levee itself was to be maintained. At that time I do not think there was any apprehension of any encroachment upon the levee by the erosion of the bank sufficient to require any provision for it. The only obligation resting upon the railroad now to take care of this situation is the obligation of protecting its own property. Its line is on that levee, and if the levee caves into the river, of course the line is gone. They are under the necessity, to a certain extent, to protect that line. I understand they have done that to some extent already.

The CHAIRMAN. What length of the levee is the railroad under obligation to maintain?

Col. NEWCOMER. I think about 5 or 6 miles. I am not precisely informed on that.

The CHAIRMAN. But, whatever it is, it represents the length of the levee occupied by the railroad as a right of way for its track.

Col. NEWCOMER. For a right of way. Of course the only objection at all, that I see, to directing the commission to apply any portion of its funds would be taking away from the commission the power to apply all of its funds in accordance with its own judgment as to the particular needs of the different localities.

The CHAIRMAN. As I understand you, the work necessary to be done is not upon the levees, but revetment work for the protection of the levees.

Col. NEWCOMER. Holding the bank for the sake of protecting the levees. The flood-control act requires that all work on the levees, construction or repair, shall be done partly at the expense of the United States and partly at the expense of the locality, the locality paying at least one-third of the entire cost. They may have to pay a larger cost if in the commission's judgment they should do so.

The CHAIRMAN. That is as to levees!

Col. NEWCOMER. That is as to the levees, and I think in principle it ought to apply as well to revetments for levee protection, because, whether you protect the levee line by revetting the bank or by building a new levee, to which they have to contribute, they are alternative propositions, and if they share in the expense of one there is no reason why they should not share in the expense of the other. But the terms of the law do not require any cooperation for revetment work. As a matter of fact, they have very rarely contributed to the expense of revetment work, though they have in a few instances. In the upper Yazoo district there was a place where the levee was threatened by caving of the bank, and where the commission did not have sufficient funds to take care of it, so that levee district paid the greater part of the cost of building the revetment to protect that place.

Mr. FREAR. In view of the question I put to you of the power of this committee to direct the expenditure of certain amounts by the Mississippi River Commission, I want to call your attention to the law authorizing flood control. Under section A it says:

All money appropriated under authority of this section shall be expended under the direction of the Secretary of War in accordance with the plans, specifications, and recommendations of the Mississippi River Commission as approved by the Chief of Engineers for controlling floods and other general improvements on the Mississippi River.

That presupposes that there are certain plans and specifications, and it is on that basis these expenditures are to be made by the Secretary of War. You believe we have authority in addition to that to direct where this money should be spent?

Col. NEWCOMER. I do not think there is any question about that. That language is like the language that is used in the preamble in all river and harbor bills, but you say where it shall be spent.

Mr. DUPRÉ. Save in the case of Vicksburg, do you recall an instance where Congress has directed the Mississippi River Commission to expend a particular sum at a particular point, except as to the Memphis situation?

Col. NEWCOMER. Oh, yes; I think that has been done in several instances. I would have to look up the bills.

Mr. DUPRÉ. I only recall Vicksburg and Memphis.

Col. NEWCOMER. This Memphis case is the only one that has occurred under the flood-control act for handling the Mississippi River work. Prior to that there were several instances where the committee directed the money to be expended at special localities.

The CHAIRMAN. Are there any other questions to be asked of Col. Newcomer? If not, Mr. Denison would like to speak again.

Mr. DENISON. A question was asked me privately since I spoke a moment ago in connection with the statement just made by Col. Newcomer, and I would like to have permission to refer briefly to that, namely, the question of the obligation of the railroad. Col. Newcomer has just stated to the committee his view of it, and I think he is absolutely correct, because I know that his statement was made after having examined the deeds of conveyance. I have a copy of the deed of conveyance here that was made by the original grantors to the railroad company. First, there was a contract to make a conveyance, and that contract was made in 1873. Then it was followed by the deed of conveyance made in 1877 to the old Cairo & Vincennes Railroad, which is the Big Four now. I am going to leave this deed with the committee, as I did last year.

Mr. BOOHER. Will you not prepare for the record just that part of the contract which refers to this matter so that it may go into the record?

Mr. DENISON. I will do that, and for your information I want to read just a part of it. This deed conveys to the railroad company in fee a small strip of land of about 40 acres in extent, that extended down to and took in part of the Ohio River bank. It was bounded on one side by the Ohio River. Now, in addition to conveying the railroad this little strip of land of 43.12 acres, more or less, in fee, is also conveyed, not in fee, but merely gave the right to use the levee running from there on back, up over certain lands which are herein described, several sections of them. The deed reads, "43.12 acres, more or less," and reference is made to a plat "hereto appended, marked A." Here is the further conveyance: "Also the right to enter into and upon any of the lands of the party of the first part hereto embraced in section Nos. 11, 14, and 23 in township 17, range 1, west of the third principal meridian, in Alexander County, and State of Illinois, being north of the first piece of ground as above described"—that is, the piece conveyed in fee—"and to construct and maintain an embankment not below in height the pres-

ent levee embankment, upon and along the Ohio River bank, on which the line of the rails of the Illinois Central Railroad Co. is now laid, and of such width not exceeding 100 feet as said party of the second part may deem expedient," etc.

In other words, there was an embankment along the Ohio River, which the Illinois Central Railroad Co. was occupying at that time, and this levee went around to that and connected with that embankment occupied by the Illinois Central. This conveyance provided that they must maintain this levee at the height of the levee that was then occupied by the Illinois Central, and that is the extent of their obligation.

Now, I want to read a subsequent provision of the deed which refers particularly to the land that was conveyed in fee. I read from page 9 of the deed: "Also the said party of the second part shall as it occupies and uses the same"—that is, the levee—"and thenceforward protect and preserve the embankment constructed, or to be constructed, upon the said lands, and also the river bank along said lands hereby conveyed, where they extend to and are bounded by the river, and in case of its failure to do so," etc.

Mr. BOOHER. Is that the bank of the 43 acres?

Mr. DENISON. Yes, sir. The railroad company was required to maintain the river bank where it owned the bank in fee, under that deed.

Mr. LEE. Who was the grantor?

Mr. DENISON. Taylor & Parsons, trustees. They were trustees of parties who originally owned all the land down there.

Mr. LEE. The city was not a party to it?

Mr. DENISON. Oh, no. Now, I will read from a subsequent deed which conveyed to them the right to use a little more property for levee purposes:

Fourth. No portion of the levee embankment or railroad embankment, now existing upon the grounds or any portion of them hereby conveyed, shall ever be cut down, removed, or otherwise impaired, but said embankments and every part thereof, shall always be kept up and maintained by the said party of the second part, his successors or assigns, to their present height and width, such height being about 51 feet above low-water line, as measured on the Government gauge, located on the Ohio River bank at the foot of Fourth Street, in said city of Cairo.

That conveyance obligated the railroad company to maintain the levee at its then height, 51 feet. As a matter of fact, since then the waters of the river have been rising higher and higher each year by reason of various conditions until to-day they are maintaining the levee at a height of 58 feet, I believe. So the railroad company, voluntarily and for its own protection, has raised this levee 5 or 6 or 7 feet higher than the contract obligated it to do; but there is nothing in the contract which obligates the railroad to prevent the river from changing its course. The deed obligates the railroad to protect the bank of that strip of land that was conveyed to it in fee, which was bounded by the river on one side.

That is the whole proposition. The Mississippi River Commission, particularly Col. Townsend, had the impression that the railroad company was obligated by the contract to maintain this river bank all along the Ohio River in front of the levee. For several years they had that impression. I think the impression has been re-

moved now, but I believe that is one of the reasons why the work has not been done; and now it has become emergent. I would like to have this committee provide for this by specific appropriation and save the enormous cost of removing that levee.

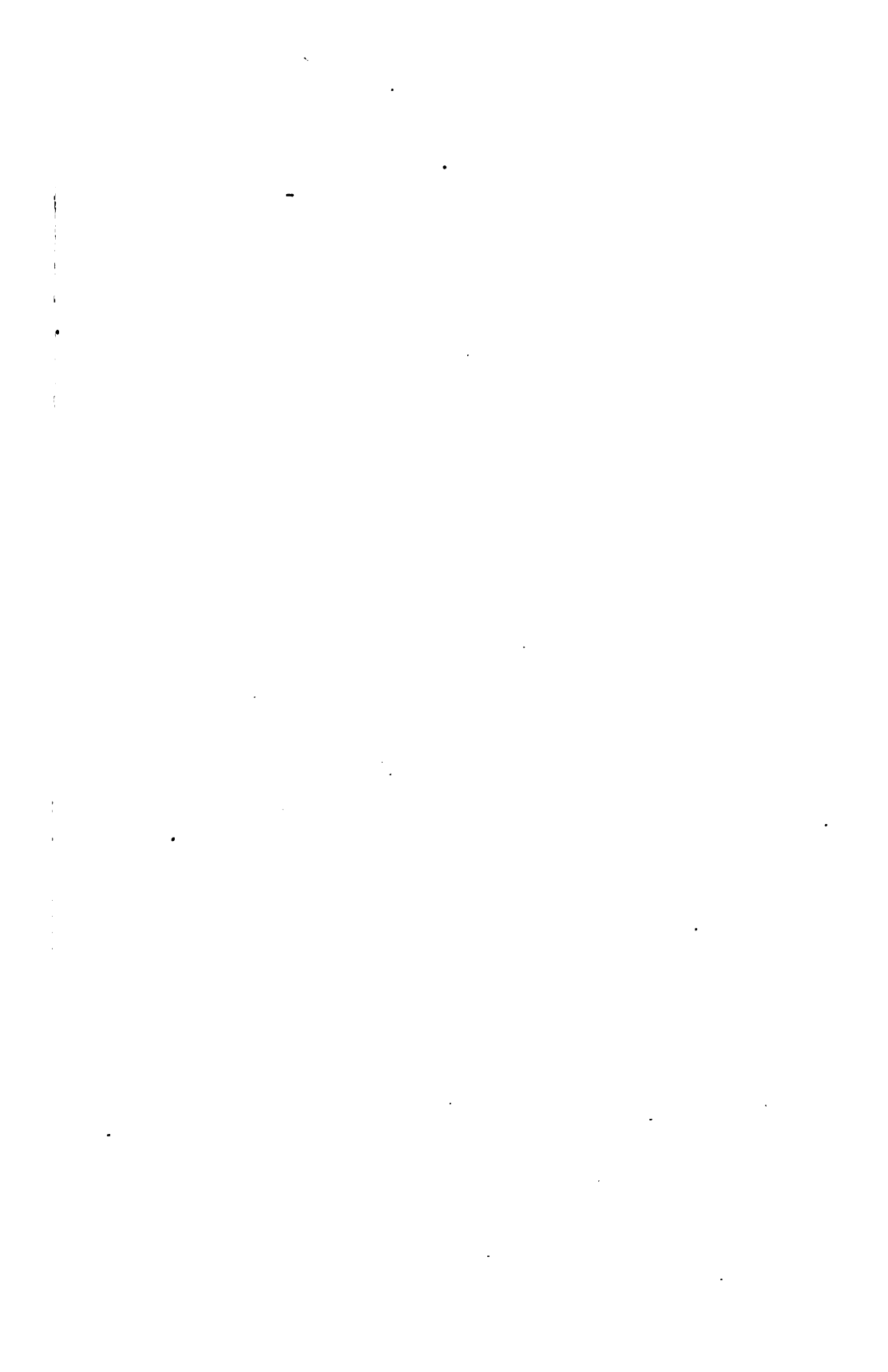
Mr. LEE. Is that strip of land next to where the work is needed?

Mr. DENISON. No, sir.

The CHAIRMAN. Col. Newcomer, to what extent is this revetment work essential in connection with maintaining the navigability of the Ohio River?

Col. NEWCOMER. It has no significance at all, I think, for that.





OKLAWAHA AND KISSIMMEE RIVERS, FLA.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF OKLAWAHA AND KISSIMMEE RIVERS, FLA.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FOURTH CONGRESS

CONSISTING OF

STEPHEN M. SPARKMAN, Florida, *Chairman*.

GEORGE F. BURGESS, Texas.

CHARLES G. EDWARDS, Georgia.

JOHN H. SMALL, North Carolina.

CHARLES F. BOOHER, Missouri.

THOMAS GALLAGHER, Illinois.

DANIEL A. DRISCOLL, New York.

THOMAS J. SCULLY, New Jersey.

CHARLES LIEB, Indiana.

WILLIAM KETTNER, California.

SAMUEL M. TAYLOR, Arkansas.

MURRAY HULBERT, New York.

H. GARLAND DUPRÉ, Louisiana.

WILLIAM E. HUMPHREY, Washington.

CHARLES A. KENNEDY, Iowa.

ANDREW J. BARCHFELD, Pennsylvania.

ROBERT M. SWITZER, Ohio.

ALLEN T. TREADWAY, Massachusetts.

JAMES A. FREAR, Wisconsin.

DOW H. DRUKKER, New Jersey.

PETER E. COSTELLO, Pennsylvania.

WILLIAM C. BROOKER, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

JANUARY 8, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

•

•

•

•

•

•

•

•

•

•

OKLAWAHA AND KISSIMMEE RIVERS, FLA.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 8, 1917.

The committee, at 12 o'clock, m., proceeded to the consideration of the project for the improvement of the Oklawaha River, in the State of Florida.

STATEMENT OF HON. FRANK CLARK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA.

MR. CLARK. I want to say, Mr. Chairman and gentlemen of the committee, that I think it hardly necessary for me to go into this matter very fully, because it has already been gone into heretofore and the committee, in 1914, reported the item and it passed the House. But as you gentlemen know, it went out in the Senate because that was the time they adopted a lump sum and struck out all items.

The report (Doc. 514), with which I have no doubt the committee is thoroughly familiar, contains a very full exposition of the whole subject. I want to call the attention of the committee to some of the commerce that is tributary to this waterway as shown at that time, and also to the freight rate and the question of its effect upon this commerce. The committee will remember that Sanford, Fla., is about the same distance from Jacksonville, as Leesburg, on this waterway, and the freights, as given here at the time of this report, show that the rates were just about one-half from Jacksonville to Sanford of the rates from Jacksonville to Leesburg, the proposition being, of course, that if this waterway is improved it will mean a tremendous saving in freights to the people tributary to that waterway.

The country adjacent to this river has improved a great deal since then, and I especially want to call the attention of the committee to some of the things that have transpired to make this very much more important now than at that time, and I expect I am going to say something that is going to surprise the committee very much. I know it would surprise some others of the members of the committee if they were present. Since this report was made there is an instance of a thousand acres of land tributary to this waterway which has been developed, planted in corn this last year, and 100,000 bushels of corn gathered from that thousand acres. To show you something of the fertility of the soil and something of the produc-

tiveness of it, and something of what is going on in that country, I have here a picture of a portion of that corn field that I would like very much for the committee to look at while I am calling attention to some other facts with reference to it. And I want to state that there are very, very, many thousands of acres of land undeveloped just as productive as this thousand acres which has been put into cultivation. And also tributary to it is a Natal hay field. The people down in that country have just begun raising hay. This is a new hay which was introduced into our section of the country by the Department of Agriculture. The fact has been that until late years all the hay used in the State of Florida has been shipped into it; but the people have found by actual test that Rhodes grass and Sudan grass and Natal grass all grow to perfection in that country, and they are now engaged in raising immense quantities of hay, and they are raising corn, too.

It was thought for a long time down in our particular section of the country that corn could not be grown to any advantage, but the fact is that the heavy hammock lands in that section of the country are just as rich as the Valley of the Nile, and just as productive, and there is an actual demonstration of it when 1,000 acres in a body of land produced 100,000 bushels of corn.

Mr. BOOHER. What do you mean by hammock land?

Mr. CLARK. Hammock land is what you call bottom land in your district. It is a heavy soil covered with oak, hickory, and magnolia.

The CHAIRMAN. All of the hardwoods grow in that section?

Mr. CLARK. Yes.

The CHAIRMAN. As a rule there is very little pine timber on it?

Mr. CLARK. Very little. Occasionally you will find some; you will find very many palmetto trees scattered about.

The CHAIRMAN. Hammock land is covered with hardwood as distinguished from pine land.

Mr. CLARK. Yes, sir.

Mr. COSTELLO. What is the approximate value of land like that on which this corn was grown?

Mr. CLARK. That is slightly over \$200 an acre.

Mr. EDWARDS. That is in its cleared state?

Mr. CLARK. That is in its cleared state and put in cultivation. There are 22,000 acres in that tract, and you can not buy an acre of it.

The CHAIRMAN. It is worth more than \$200 an acre. I apprehend you could not buy that hammock land for \$200 an acre.

Mr. CLARK. After it is in cultivation I presume you could not; but I presume if you would take a large body of land you would get a good deal of that hammock on it, and probably you would get it for \$50 an acre.

Mr. EDWARDS. What is the nearest large town to this improvement?

Mr. CLARK. There are a number of towns, Mr. Edwards, that are tributary to it. There is Ocala, and the country tributary to Ocala would be largely benefited by this improvement. Ocala is a town of six or seven thousand population, in the center of a very large agricultural country. Then there is Leesburg, and although the census shows only about 1,500, I think, within the corporate limits, it has really about 4,000 population.

Mr. EDWARDS. Is Ocala below the frost line?

Mr. CLARK. There is a question about where the frost line is. It is not very cold there. They grow citrous fruits there all right.

Mr. EDWARDS. They do at Leesburg all right?

Mr. CLARK. Oh, yes. I want to state further that there has been established, since this report was made, at Leesburg (which is practically at the head of this improvement), I mean on the lake at the head of the Oklawaha River, a station for the gathering of hides, furs, bones, iron, rags, paper, and other articles, by-products, and junk, which needs water transportation. This handles not less than 100 tons a month. A moss-refining industry is being established at Leesburg with a capacity of 5 tons daily, which needs water transportation. A company is being organized to establish a boat line from Leesburg to Jacksonville, with two trips weekly, carrying passengers and freight. Stock to the amount of \$4,500 has been subscribed to date. If the greater depth is granted, this line will make daily sailings and will put on large freight boats.

Steps have been taken for the establishment on the shore of Lake Griffin Canal of a bonded warehouse for Natal hay, of which there is approximately 30,000 tons produced each year along the river and on the shores of the lakes. And the growing of this Natal hay is just a matter of the last three or four years. The people have just begun to get started. I think—in fact, I know—it originated with the Department of Agriculture in sending out these little packages of grass seed. I sent a good many of them all over that country, and I know the rest of the delegation did, and it got started in that way, and it is undoubtedly the hay for that country. And they are making the best of it.

I want to call your attention to an article here, gentlemen, on the subject of this improvement and advocating the improvement. It says:

By far the greatest development of the past year in the domain of this project is the bringing under cultivation of the rich muck land in the Oklawaha Valley below Lake Griffin. This year there was one field of corn, 1,000 acres in extent, which produced approximately 100,000 bushels of corn. From that field alone 3,400 tons were carried by water, and water transportation was the only possible hope. If it had been necessary to haul that corn to a railroad for shipment, it would have required a haul of 4 miles and a return of the same distance with empty wagons. The road is both hilly and sandy, and the loads would have been small. It would have been a task to daunt the most valiant. So it was lightened in shallow barges at great inconvenience and with ever-present danger of striking a twist in the stream that the barge could not be drawn around.

Across Lake Harris from Leesburg is the new town of Howey, which has added a great deal to the tonnage this year. This town has a new hotel of 50 rooms, the material for which was brought to Howey by water. In fact, there is no other way to reach Howey except by team or auto. There are upward of 500 tons of material and fixtures in this building alone. Then Howey has imported farm machinery, tools, electric-light equipment, dynamite, and other industrial supplies to the extent of approximately 1,000 tons more. Food supplies and other products, with furniture and hardware for the homes, add considerably to the total, making the tonnage for this one little community not less than 2,000 tons. This is all new in the past 12 months, and it is not only permanent but is merely a start toward a great tonnage that will grow larger from year to year.

There are now over 12,000 acres of land in Lake County alone producing hay. The average production is $2\frac{1}{2}$ tons to the acre for the year, making a total now of 30,000 tons. Less than one-fourth of this is consumed on the farms where it is produced, but must be shipped to the open market for redistribution. That gives a total of 22,500 tons of hay which moves now, and with a

constantly growing acreage this will grow by leaps and bounds. To go back three years, it is found that the total production was about 100 tons of this hay. A jump from 100 tons to 30,000 tons in three years is something that transportation facilities must be prepared to meet, and when it is known that the acreage being cleared for this Natal hay is greater now than ever before the great increase in the immediate future can be seen very readily.

There is one great industry which is only awaiting the providing of water transportation to spring into being, furnishing a tonnage that will be greater than any industry now affords. This is in road clay.

Lake County is underlaid with a peculiar formation of clay, and this is of particularly good quality for road building in the section adjoining the lakes. All along the Oklawaha and the St. Johns Rivers are counties where road material has to be imported. The 250 miles of good roads in Lake County can be reproduced in any of these river counties when it is possible to float barges of the clay that is so plentiful in Lake County, but in order to make it profitable or even possible to transport this clay it must be moved in large lots.

The supply of this clay is practically inexhaustible and the demand so great that it insures a permanent commerce if water transportation is provided.

All of these things that have been presented are new.

I have the figures, and I will file them with the committee. At Ocala—Ocala, you gentlemen will remember, is about $4\frac{1}{2}$ miles from Silver Springs. Silver Springs Run empties into the Oklawaha River and is tributary to it. The people of Ocala at one time had a small boat or two running on that run and going to Jacksonville, in fact. They have a hard road, and there is a railroad right to the spring at the head of the run. There is a strong movement on foot to build an electric line now from Ocala to Silver Springs, which would make that entire country there tributary to this waterway. So that if this improvement is made, it not only means all these towns along these lakes and along the Oklawaha River proper, which are Leesburg, Eustis, Mount Dora, Tavares, Tangarine, Lisbon, Harvey, and other towns, but it means a benefit to the business of Ocala and that whole surrounding country, which is immense. I have a statement from the Ocala Board of Trade showing the freights which they paid last year, and Ocala is about as far from Jacksonville as Sanford, and the rates which obtained from Jacksonville to Ocala would be about the same as to Leesburg. They paid in freights \$996,000 and some odd—practically a million dollars in freights. And it is figured that this improvement would cut that practically in half, which would be a saving for the Ocala country of at least \$450,000 to \$500,000 in freight rates.

Now, I want to call your attention for a moment or two to what Maj. Slattery (Capt. Slattery at that time) said with reference to this:

I am of the opinion that a material development of this country would follow the construction of a reliable waterway from Lake Dora to the mouth of the river, suitable connecting waterways being provided to points on the shores of the lakes at the headwaters; that the improvement of the river is worthy of being undertaken by the United States, notwithstanding the fact that the cost will be great, compared with the commerce that will be benefited at the present time and for some years hence; that three plans of improvement should be considered. * * *

The canals at Leesburg will provide public terminals under the control of the municipal authorities, and it is stated by those interested in the improvement that similar facilities will be provided at other points.

Along the banks of the river there is much marshland, which would be highly productive if reclaimed. It may be possible to coordinate the reclamation of this land with the improvement of the river in the interest of navigation.

The CHAIRMAN. That has not been done in this project?

Mr. CLARK. No.

The CHAIRMAN. No reclamation of land is involved?

Mr. CLARK. No; I understand not. He mentions that, though, in his report. I just mention it to show his opinion.

Mr. KETTNER. You have read the proviso on page 2, have you, of that report?

Mr. CLARK. Yes. There would be no difficulty about that at all, Mr. Kettner. The people understand that thoroughly, and are willing for that sort of a condition to be attached to it, so far as that is concerned. They are willing to meet it.

Now, gentlemen, if you have noticed the map attached to this report—I wish you would look at it for a moment, if you have not noticed it—you will see that the Oklawaha River begins in this chain of lakes up here near Leesburg. Leesburg is between Lakes Harris and Griffin, an immense chain of lakes. There is Lake Harris, at this point, and Leesburg is located right here, between Lake Harris and Lake Griffin [indicating on map]. Here is Lake Eustis, Lake Dora, and all of this chain of lakes here [indicating], and the river comes out of Lake Griffin, goes in a northerly direction here [indicating]. Here is Silver Springs Run, here is Silver Springs, and here is Ocala [indicating]. Silver Springs Run comes out of the spring which, by the way, is an immense body of water. I was on it last fall, and it is some 60 or 70 feet deep; and I would like to say for the benefit of the committee that, although I have lived in Florida for about 33 years now and I have been to Silver Springs, I never really realized what it was until that trip. There is nothing in the United States any more wonderful than Silver Springs, right there near that place.

Mr. EDWARDS. Why is it so wonderful?

Mr. CLARK. Well, you go out in a glass-bottom boat they have there, and the water is so clear and crystal you can see a 10-cent piece on the bottom of the lake, sometimes 60 or 70 feet deep.

Mr. EDWARDS. Can you see anything besides money on the bottom?

Mr. CLARK. You can see anything; yes. It is perfectly clear, and there are great caverns, apparently, under there. There is one place called Christmas Eve, with a lot of beautiful trees, which look like Christmas trees, on the bottom, apparently covered with tinsel. And there is one scene of a snowstorm down there. The water coming up from the bottom, I presume, throws little fine particles of rock into the water, presenting the appearance of a snowstorm. It is a wonderful place, and there is plenty of water there, and the boats come right up—

Mr. EDWARDS. Is it sulphur water?

Mr. CLARK. No; it is not strong with sulphur.

Mr. EDWARDS. Does it have any health-giving qualities?

Mr. CLARK. I do not know that it has, Mr. Edwards; it is just a clear, pure water.

Mr. KETTNER. Has the gentleman ever visited the Catalina Islands?

Mr. CLARK. No; but I would like to. And I want you to see Silver Springs, too. I was going to say this river runs up here, and there is Silver Springs; there is the run coming down into the Oklawaha River, and then the river goes on up in a northerly direction

and comes into the St. Johns River at Welaka, which is in Mr. Sears's district.

Mr. BOOHER. What is the distance from the source of the river to the mouth?

Mr. CLARK. I should judge it must be 125 or 150 miles—isn't it, Mr. Chairman?

The CHAIRMAN. What is that question; I did not catch it?

Mr. CLARK. The distance from the source of the river to the mouth?

The CHAIRMAN. About 125 miles.

Mr. BOOHER. What part of that is this proposed improvement to cover?

Mr. CLARK. The improvement, as I understand it, is to cover from the source here to Silver Springs Run.

The CHAIRMAN. There may have to be some work down below?

Mr. CLARK. Yes; there may be some work to be done below; but as I understand it, that part is in pretty good condition at the present time.

Mr. BOOHER. How far is the river navigable now; or is it navigable?

Mr. CLARK. Oh, yes; it is navigable up to Silver Springs.

Mr. BOOHER. And then from Silver Springs, or Silver Springs Run; is that where this improvement is to be made?

Mr. KETTNER. No; from Lake Harris to Silver Springs.

Mr. CLARK. Lake Harris is down at the source of the river.

The CHAIRMAN. It extends to the head of Silver Springs Run.

Mr. CLARK. It is over here [indicating] and runs to the head of Silver Springs Run.

The CHAIRMAN. And the upper end of the improvement is at Lake Dora?

Mr. CLARK. Yes; at Lake Dora; and there are canals connecting those lakes.

The CHAIRMAN. Lake Dora is near Tavares?

Mr. CLARK. Yes; at Tavares. Tavares is the county seat of the county in which Leesburg is situated.

Mr. BOOHER. How long is the river before it goes into the St. Johns River?

Mr. CLARK. About one hundred and twenty-five or thirty miles; something like that. And I want to call your attention, too, to the fact that this stream runs right through the heart of the State. It touches the very heart of the State of Florida. It goes through some of the most productive lands in the whole State. Anything can be grown there except apples and wheat; but almost anything else in the world can be grown right there tributary to this waterway, and if they can get a permanent watercourse there that will be navigable at all times (and the engineers say we can), it is going to develop a wonderful commerce through that country between all this lower country from here to Jacksonville [indicating on map].

Mr. BOOHER. What are the rail facilities through that country? Have you railroads through that country?

Mr. CLARK. Yes; the Seaboard Air Line and the Atlantic Coast Line.

Mr. EDWARDS. There is an immense area there that is without transportation except on the coast.

Mr. CLARK. Oh, yes; so is this area here [indicating]; there is no railroad here at all.

Mr. HULBERT. The Oklawaha River runs parallel to the railroad, doesn't it?

Mr. CLARK. Yes; but some distance from it.

Mr. BOOHER. Is there a railroad on both sides of the river?

Mr. CLARK. Yes. Here is the Atlantic Coast Line right here.

Mr. BOOHER. How close does that get to the river?

Mr. CLARK. Oh, I do not know how close.

Mr. BOOHER. What is the average distance from the river of the railroad on the west?

The CHAIRMAN. The Atlantic Coast Line is the nearest.

Mr. CLARK. The Atlantic Coast Line is the nearest. I can not say what the average distance is; it is so crooked.

The CHAIRMAN. It varies, probably, from 5 to 10 miles.

Mr. BOOHER. From the river?

The CHAIRMAN. Yes.

Mr. BOOHER. How far is the river from the other railroad?

Mr. CLARK. This is the Atlantic Coast Line on this side [indicating]. That is a very great distance; you see up here it is two-thirds across the State.

Mr. BOOHER. Then it is 100 or 200 miles from this river?

Mr. CLARK. It must be at least 100.

Mr. HULBERT. Is Lake George navigable?

Mr. CLARK. Yes; Lake George is part of the St. Johns River.

Mr. HULBERT. And the Atlantic Coast Line, which you have just referred to, parallels Lake George and its connection with the St. Johns River?

Mr. CLARK. Yes.

Mr. HULBERT. So that that section of the State is served by the Atlantic Coast Line and also by a navigable lake, Lake George, and the St. Johns River?

Mr. CLARK. Yes, sir.

Mr. HULBERT. And the west side of the State is served by the Ocala Northern Railway and the Oklawaha River, which parallel one another?

Mr. CLARK. Yes.

The CHAIRMAN. There are minerals which are being produced there, kieselguhr and kaolin earth?

Mr. CLARK. Yes, sir. That was all covered in the former report, you know.

The CHAIRMAN. That is rather heavy freight?

Mr. CLARK. Yes; extremely heavy.

The CHAIRMAN. I understand that they will constitute one of the important items of commerce down this river whenever it is improved; at least, that is the purpose of it?

Mr. CLARK. Yes.

The CHAIRMAN. Kieselguhr is something that enters into the manufacture of explosives, I believe, and kaolin is used in making chinaware.

Mr. COSTELLO. And they use it for filtering purposes.

Mr. TAYLOR. Is there any potash along the proposed improvement?

Mr. CLARK. We have phosphates.

Mr. TAYLOR. Phosphates, I mean.

Mr. CLARK. Oh, yes; there is a great deal of phosphate all through that country, and that would be transported that way.

I do not think of anything else, unless the committee desire to ask some questions, as everything is so thoroughly set out in that report of Maj. Slattery's.

Mr. HUMPHREY. Would you point out on this big map where this improvement is located?

Mr. CLARK. Here is Ocala right here; Silver Springs is here—

Mr. EDWARDS. That is in the same county with Ocala?

Mr. CLARK. Yes; in the same county; Marion County. Here is Leesburg; the Oklawaha River comes right up this way [indicating on map].

Mr. HUMPHREY. Then it goes out the St. Johns River?

Mr. CLARK. When it gets here, it comes down here and down to there; it starts here and goes around [indicating].

Mr. HUMPHREY. Do you remember the distance?

Mr. CLARK. About 125 miles.

Mr. BOOHER. As I understand you, the principal part of the improvement is to be made between Silver Springs and Starkes Ferry?

Mr. CLARK. No; it is to be made here, from Leesburg up.

Mr. BOOHER. From Leesburg up?

Mr. CLARK. Yes; that is where the improvement is to be made. It would be about 60 miles across there in the pine country where there is not any transportation at all.

Mr. BOOHER. There is no railroad here at all?

Mr. CLARK. None at all.

Mr. BOOHER. What railroad is that [indicating on map]?

Mr. CLARK. That is the Coast Line?

Mr. BOOHER. And then between the Oklawaha River and the Coast Line there are places 60 to 70 miles across most of the way?

Mr. CLARK. Yes.

Mr. BOOHER. Then on the west side of the river the railroad comes in at Ocala?

Mr. CLARK. Yes.

Mr. BOOHER. And about how far from Ocala is that?

Mr. CLARK. From Ocala over to Silver Springs is about 5½ miles. That puts you at the head of Silver Springs Run and that lands you into the Oklawaha.

I do not know, gentlemen, that I care to take up any more time. I would like to file a statement with reference to the commerce at Ocala and the country tributary to it. I had that statement but forgot to bring it along.

The CHAIRMAN. I wish you would do that, Mr. Clark.

Mr. CLARK. I would like to do that, because I contend when this improvement is made it is going to benefit all that whole section of the country.

A gentleman asked about the hammock land and the kind of growth. I would like to say you find live-oak trees 3, 5, or 6 feet

in diameter, and you could put one of them out in the middle of the street here and it would touch the curb on each side—one of these wide streets.

The CHAIRMAN. That does not appeal much to Mr. Kettner, however, out in California.

Mr. CLARK. No; but it takes good land to produce trees like that; you will agree to that?

Mr. KETTNER. Yes, indeed.

Mr. HULBERT. I would like to ask Mr. Clark one question: What is the special urgency of the adoption of this Oklawaha project at this time and to what extent would it suffer if it was passed over until the Sixty-fifth Congress?

Mr. CLARK. Well, Mr. Hulbert, the country is rapidly improving. Florida gained more, the census people say, in percentage of population in the last year, than any State in the Union. I get that from the Census Bureau.

Mr. HULBERT. Does that take in Palm Beach and Ormond Beach?

Mr. CLARK. It takes in actual all-the-year-around residents, and not tourists. And that is a fact; that is a statement we get from the Census Bureau—that we gained in percentage a greater population than any State in the Union. The country is building up very rapidly. These people are paying enormous freight rates, and it is absolutely impossible for them to keep it up. They have continued and they have lived, but they are not getting a fair show in the race of life as long as they have to pay those enormous rates of freight.

Mr. HULBERT. What I mean is, Is there any particular urgency for the adoption of it at this time?

Mr. CLARK. I do not know that there is any particular urgency for its adoption at this time, except that the sooner they get relief from the intolerable conditions under which they are laboring the better off they will be and the better for the country.

Mr. EDWARDS. And the saving of the freight rates in that one locality alone would almost pay for it?

Mr. CLARK. Yes. The freight savings in one year, as shown by this report, would be \$600,000. If it would amount to four or five hundred thousand, in the Ocala country alone you would have millions saved in freight.

Mr. EDWARDS. And it would more than pay for it with the savings in one year?

Mr. CLARK. Yes. I understand that two years ago, in view of this proviso Mr. Kettner referred to a while ago, the people in the community got ready for this work, and they have secured the right of way and have complied with that proviso; and they are ready at any time to close the matter up.

The CHAIRMAN. As I understand, the Government is not to purchase any right of way at all?

Mr. CLARK. None at all; no, sir.

The CHAIRMAN. The Government is not to be at any expense for securing the right of way?

Mr. CLARK. Not a particle; and, of course, the committee understands, I suppose, that Leesburg has issued bonds for the purpose

of connecting those two canals; that is shown in the report here—connecting those two lakes, I mean—Lake Harris and Lake Griffin.

Mr. DUPRÉ. That is in the committee's proviso?

Mr. CLARK. Yes. And a part of that work has already been done, and they are ready to go forward at any time they know this improvement is going ahead.

(The following is the statement filed by Mr. Clark:)

INCOMING AND OUTGOING FREIGHT, OCALA, FLA., AND TRIBUTARY TERRITORY,
COMPILED BY OCALA BOARD OF TRADE—THIS FREIGHT WOULD ALL BE AFFECTED
BY OKLAWAHA RIVER IMPROVEMENT.

HANDLED BY HOWARD BOAT LINE.

	ToPalatka.	Local.
General merchandise.....tons..	245	4,680
Hay and grain.....do..	386	1,560
Fertilizer.....do..	18	900
Naval stores.....do..	1,853	4,239
Sirup.....do..	19	25
Oranges.....boxes..	2,186	957

HANDLED BY "SHARPSHOOTER," LOCALLY OUT.

Groceries -----tons--	98	Sirup-----tons--	34
Hay -----do--	81	Iron -----do--	6
Grain -----do--	2,800	Rosin -----do--	829
Lumber -----do--	157	Spirits -----do--	206
Miscellaneous -----do--	52	Gasoline -----gallons--	18
Vegetables -----do--	166	Hardware -----tons--	17
Fertilizer -----do--	196	Tonnage into Silver Springs,	
Oranges -----boxes--	295	various -----	1,790

The new cotton mill has orders out for 10 cars of machinery. It will use 1,200 bales of short cotton, and will ship out 1,000 cases of cotton yarn. Plant cost, \$100,000. This by negroes. Will have one equally as large in construction by whites. Every line of business will have 50 to 100 per cent increase coming year.

INCOMING.		Freight charges.
Cotton -----tons--	260	\$12,300
Dry goods -----do--	1,235	34,443
Fertilizer -----do--	975	8,430
Groceries (fancy) -----do--	1,237	45,475
Groceries (wholesale) -----do--	11,775	94,340
Gas and oil -----do--	7,370	15,320
Hardware -----do--	12,300	97,375
Hay -----do--	6,450	8,750
Lumber and timber -----do--	9,840	19,000
Meats, fresh and salt -----do--	1,500	3,500
Machinery -----do--	14,575	64,150
Miscellany -----do--	25,000	175,000
Wood -----do--	3,850	2,450
Live stock -----do--	350	2,600
Coke -----do--	460	3,900
Pig and scrap iron -----do--	4,000	3,500
Nails, wire, fencing -----do--	350	17,960
Building material -----do--	13,350	26,860
Total -----	114,877	635,068

BUSINESS, OUTGOING.

			Freight charges.
Cattle	head	54, 820	\$65, 000
Mules	do	3, 807	7, 000
Hogs	do	10, 000	10, 000
Cotton	bales	8, 000	12, 000
Corn	bushels	500, 000	5, 000
Peanuts	tons	500	Varies.
Watermelons	cars	1, 200	18, 000
Vegetables	do	2, 500	43, 750
Cantaloupes	do	750	11, 250
Cotton seed	tons	180	3, 420
Crate materials	do	4, 320	5, 440
Fertilizer	do	1, 710	18, 600
Groceries	do	732	6, 900
Grapefruit	boxes	75, 000	75, 000
Lumber and timber	tons	5, 022	71, 200
Machinery	do	3, 500	3, 500
Miscellany	do	1, 450	20, 790
Naval stores, rosin	barrels	170, 000	25, 500
Naval stores, spirits	do	55, 000	16, 500
Oranges	boxes	530, 000	530, 000
Sand	tons	90, 000	4, 500
Lime products	do	15, 000	15, 000
Building rock	do	19, 000	28, 125
Total			996, 475

To this add: Phosphate, 300,000,000 tons, now paying \$1.35 per ton average freight charges to perts, while millions go to interior points to fertilizer factories; over 1,000,000,000 feet of lumber; now moving to Cuba from one mine as fertilizer, soft phosphate, 25,000 tons annually under contract. Freight, \$6.21½ per ton.

STATEMENT OF HON. WILLIAM JOSEPH SEARS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA.

Mr. SEARS. Mr. Chairman, I came in primarily to indorse Mr. Clark's proposition. It is not necessary for me to go into that, because he has gone into it fully.

We rather thought it was not necessary to discuss the Kissimmee River appropriation, because it has been before this committee so many times, is favorably reported on by the War Department engineers, and the figures and facts show the Kissimmee River is entitled to it. Last year, in my humble way here before the House, I undertook to clear up some misstatements relative to the Kissimmee River, and I thought at that time I had done so. But evidently it was either so shallow or so deep that some people could not understand the explanation.

Kissimmee, as stated by Mr. Clark, is not on the Kissimmee River; it is about 65 miles from the Kissimmee River and is on Lake Tohopekaliga, which connects with Lake Hatchincha, and thence through Lake Kissimmee to the Kissimmee River.

Last year, as shown by the report from the War Department, the value of the commerce over the Kissimmee River was \$1,164,045. Now, I make the statement to this committee that if a river over which the commerce is that much is not entitled to some assistance from the Government, I do not know where you would find a river that was entitled to aid. This has been the case for 20 years. In 1915 the commerce was practically nothing because we could not get any transportation on account of the lack of water. About one

year in five or one year in four that is the case. There is, to be fair with you, about two months in the year when possibly there will be no transportation over the Kissimmee River, because there is not sufficient water; that is, it gets too shallow. But I have never seen it dry enough to burn. I have waded over it when it was shallow and had to pull a rowboat along. But 10 months in the year, and last year for 12 months in the year, all the boats were able to make regular trips. And when I tell you that to make it possible to have \$1,164,045 value of commerce carried over that river the captain had to turn the steamer backwards and for 4 or 5 miles fan his way through sand, taking him a day to go 8 miles that he ought to have gone in an hour, you will see what work he had to do to get that commerce transported.

Mr. EDWARDS. From what point to what point does this proposed improvement cover?

Mr. SEARS. The original appropriation of \$35,000 takes in, to be absolutely fair with the committee, from South Port, 13 miles across Lake Tohopekaliga, to Lake Okechobee, a distance of about 175 miles by river.

The CHAIRMAN. It is about 100 miles on a straight line.

Mr. SEARS. About 100 miles on a straight line and 175 miles via the river.

Mr. DUPRÉ. The Caloosahatchee project and the Kissimmee project are covered in the same report, aren't they?

Mr. SEAR.. No.

Mr. DUPRÉ. The document seems to cover both of them?

Mr. SEARS. They are separate and distinct. The one I am favoring is page 2309, part 2, Annual Report of the Chief of Engineers.

Mr. EDWARDS. What about the rail facilities in the area traversed by this river?

Mr. SEARS. Here is Kissimmee [indicating on map]. You start at Kissimmee, go through Lake Tohopekaliga; then through a canal that discharges into Lake Cypress; through Lake Cypress; through another canal constructed by the Diston Land Co. into Lake Hatchincha; through Lake Hatchincha; through what is called by some the Old Kissimmee River; and through another canal constructed by the Diston Land Co., without expense to the Government, into Lake Kissimmee. Through Lake Kissimmee, a distance of about 23 miles, no work is needed.

Mr. EDWARDS. How far is Lake Kissimmee from the railroad?

Mr. SEARS. Lake Kissimmee now—the nearest point from Lake Kissimmee to the railroad is Keenansville.

Mr. EDWARDS. What is the distance?

Mr. SEARS. The distance is about 35 or 40 miles.

Mr. EDWARDS. Then you have an area there that is now cut off from the railroad of about 35 or 40 miles?

Mr. SEARS. Thirty-five or 40 miles.

Mr. EDWARDS. What is grown principally down in that section. Mr. Sears?

Mr. SEARS. At the present time, the principal growth is oranges and some truck, but, to be fair with the committee, not much truck, because we can not rely on transportation. The two months of dry weather may come in the early spring, may come along in May, or

may come in the summer; and if they come we can not get the truck out. As a result the people are engaged principally in stock raising.

Mr. EDWARDS. You have a magnificent section there with fertile soil, with the people cut off from transportation, except by means of this river?

Mr. SEARS. Except by means of this river from Lake Kissimmee to Lake Okechobee, which is the largest inland lake in the world, a distance of about 100 miles. The nearest point is Okechobee City to the railroad, and it is 25 miles from there over here [indicating on map] and therefore from here would be 50 miles to the railroad. The people living there engage in the cattle industry, which is one of the largest industries and most important in the United States; and the raising of orange trees and the shipping of oranges, and they are now gradually beginning to raise truck. This country is rapidly being settled up by northern people on 5 and 10 acre tracts. There only means of commerce or transportation is the Kissimmee River.

I do not want to mislead this committee and would not mislead you to get a single appropriation. It is proposed and has been proposed for three or four years that the railroad will cross the river about Fort Kissimmee. If it should, it will then be at least 60 miles to Lake Kissimmee after this road is built.

The CHAIRMAN. I thought it was going to cross about Bassenger?

Mr. SEARS. That makes it worse; if it crosses at Bassenger, it will make it 100 miles for the people to get to the railroad to have good transportation; but for the people at Bassenger the drive would not be quite as hard because Okechobee is nearer. The people from Bassenger, during the one or two months of dry weather, haul from Kissimmee in ox teams, their groveries, and the haul is 125 miles.

Mr. HUMPHREY. What is the character of the road?

Mr. SEARS. I have never been to Texas, but they tell me—those who have been to Texas—it is somewhat similar to their prairie.

Mr. COSTELLO. It is expected if the development of this waterway is made, there will be a commerce of \$2,000,000?

Mr. SEARS. More.

Mr. SWITZER. Are these free waterways, or are tolls charged?

Mr. SEARS. They are absolutely free, and nearly everything in Florida is free except the living.

Mr. TAYLOR. That lake is said to be the biggest in the world?

Mr. SEARS. It is 33 miles this way and 32 that way, and when you get out in the center you can not see land. From Kissimmee here, to show the importance of it, you can come to Lake Okechobee, and you can come out here at Miami and go from there up to Jacksonville by water; or you can come through here and go through Col. Sparkman's district and out into the Gulf of Mexico. To make that possible for 10 months, and most years for 12 months, out of the year, the Government has spent approximately \$35,000. And yet when I come before this committee and ask for an additional appropriation of \$47,000, it is called pork, with almost a million dollars of commerce going over that river now. It would be more if the boats could run more. Capt. Johnson for years has made it possible to navigate that river by fanning his way when it is low water; and I have never seen it absolutely dry.

Mr. BOOHER. If it would dry up, you might use it as a road.

Mr. SEARS. I am much obliged to the committee for hearing me.

Mr. BOOHER. What is the extent of what is known as the Kissimmee River Valley?

Mr. SEARS. The Kissimmee River Valley is about 32 miles wide and I should say 60 or 70 miles long. Congressman Clark says it is about 100 miles. And it is fully 25 miles on each side of the river, and extends from St. Cloud to Lake Okechobee.

Mr. BOOHER. You have at least 2,000 acres then of that muck land in there?

Mr. SEARS. Two hundred thousand.

Mr. BOOHER. Two thousand miles, I should say?

Mr. SEARS. Yes; just about. And that is not under water there. except right on the edge of the Kissimmee River.

(The committee thereupon, at 12.45 o'clock, took a recess until 2.30 o'clock p. m.)

43

RIVER AND HARBOR IMPROVEMENTS IN OREGON AND WASHINGTON

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF COQUILLE BAR, HARBOR,
AND RIVER, COOS BAY HARBOR, CLATSKANIE
AND SIUSLAW RIVERS, YAQUINA BAR, BAY, AND
HARBOR, AND WILLAMETTE RIVER ABOVE
PORTLAND AND YAMHILL RIVER, OREG., AND
COLUMBIA AND LOWER WILLAMETTE RIVERS
BELOW VANCOUVER, WASH., AND
PORTLAND, OREG.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 8, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

RIVER AND HARBOR IMPROVEMENTS IN OREGON AND WASHINGTON.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 8, 1918.

The committee met at 10 o'clock a. m., Hon. John H. Small (chairman), presiding.

The CHAIRMAN. Mr. Hawley has requested that he be given an opportunity to be heard. Mr. Hawley always has his matters well prepared and presents them in a systematic way and I suggest that we hear him now.

STATEMENT OF HON. WILLIS C. HAWLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON.

Mr. HAWLEY. Here is a list of the projects in which I am interested and which have been favorably recommended by the engineers as worthy of improvement. I very much appreciated the courtesy of the chairman and the committee in giving me the opportunity to be heard at this time.

The CHAIRMAN. We will be glad to hear from you, Mr. Hawley.

Mr. HAWLEY. I have arranged these projects on the sheet I have distributed to the committee, in the order in which they came geographically.

Mr. FREAR. According to their importance?

Mr. HAWLEY. Not according to their importance, but in the order they come along on the coast of the State of Oregon, beginning on the south.

Mr. KENNEDY. Would it not be better to have them in the order of their importance?

Mr. HAWLEY. Possibly the arrangement indicated will be more convenient as it follows that adopted in the Engineer's report. First on this sheet is the name of the project, second the amount recommended by the engineers, and third is the House document and the page of the engineers' report or other public document containing the favorable recommendation and a detailed statement of the advantages of and the necessity for the proposed improvement.

I will not comment very much at length at this time on the facts contained in the engineer's report, as I understand the committee gave careful consideration to the facts given in this report, but rather upon matters I myself have observed that are not in the engineer's report.

The CHAIRMAN. Suppose you just name the project and then make whatever comments you desire upon each one.

Mr. HAWLEY. With pleasure. I am taking them in order.

The CHAIRMAN. It will appear a little better in the record, if you do that.

Mr. HAWLEY. The first is the Coquille River project, Coquille to Bandon. This is the project for the further improvement of the Coquille River from the city of Coquille to the city of Bandon, covering the lower portion of the river, and is approved by the engineers. This is a cooperative project. The cost of it will be \$18,000. The ports on the river propose to construct a dredge at a cost of something like \$35,000 or \$40,000, so that the amount of money that the locality will expend for this necessary improvement will be several times the amount the Government will expend, if the project is adopted.

Mr. FREAR. Has this been reported on by the Engineers?

Mr. HAWLEY. Yes; it has been favorably reported on by the Engineers. You will find that in the Engineer's report on page 1917, and in House Document No. 70, Sixty-fifth Congress, first session.

The CHAIRMAN. I will say to the members of the committee that this is a new project.

Mr. HAWLEY. The Engineers in their report say that the port of Bandon has made an offer to construct and provide for this work, free of charge to the Government, a suitable suction dredge, the United States supplying the funds to operate the dredge.

The port commissioners inform me there that the dredge they contemplate constructing would cost them something like \$35,000 or \$40,000, or possibly \$50,000 at the present price of material.

There has been a great revival of business on the river during the last season, the lumber business having taken on new life. But the Engineer's Report does not show the amount of tonnage on the river now as the data for it were collected some time ago, and prior to the large increase in business. There are several new mills now operating and several others willing to come in. It is very a meritorious project, greatly needed, and the people offer most generous cooperation.

The next item is for the same river, for the bar and entrance. The report is printed in House Document No. 207, Sixty-fifth Congress, first session. This is also a cooperative project. The total cost of the proposed improvement of the bar and entrance is to be \$128,000. The people are to furnish \$64,000 of that amount, and the Government is asked to contribute a similar amount.

This last summer the mills on the lower part of the river several times had to shut down operations because their docks were filled with lumber awaiting transportation. They were sawing spruce lumber for the Government, aeroplane stock for machines to be used in the war, and unless they could ship their box material, that is lumber which is not classed as useful for aeroplane stock, their docks would become crowded and they would be compelled to shut down their mills. The Government sent some engineers to see if they could not relieve the situation. There had formed inside of the jetties, about 1,000 feet from the end of the jetty, a hump of sand that prevented the boats from getting in and out. Several boats that came in were prevented by that obstruction from going to sea loaded and they had to unload and go out without cargo. As a consequence the tonnage for the summer was very much reduced.

But the people are so much in earnest about the river and harbor entrance they are willing to put up a great deal more money than they are asking to be supplied by the Government, if the Government will undertake this work. The Government will need a great deal of spruce for aeroplane stock and there is an immense quantity of it in that section of the country. The spruce belt there is the best of any section, I think, in the United States, and extends from southwestern Washington to northern California. The Government is now buying a great deal of this spruce stock, and the Government has been delayed in obtaining spruce lumber by the shutting down of the mills. The mills in order to operate must be able to ship their ordinary lumber to the markets.

This proposed cooperative improvement will remedy that difficulty and make the harbor of that river feasible for the operation of boats carrying a tonnage that will make it profitable to operate, and at all seasons of the year. I earnestly hope this project will be adopted.

Next is the inner harbor project of Coos Bay. That is the third one on the list, and the point of that is this: The people of Coos Bay have raised by taxation and expended about \$650,000 in the improvement of that waterway. A great portion of this went into the construction of an inner channel. They made that inner channel 25 feet deep and about 300 feet wide, with three large turning basins, one at North Bend, one at Marshfield and one at Smiths Mill. The bottom of Coos Bay is soft material, and in some places the natural channel was only 12 or 14 feet deep. In cutting through that soft stuff to a sufficient depth to provide a channel 25 feet deep in places, the cut would have almost perpendicular sides at first. These places would gradually subside and fill in the bottom of the channel in course of time.

They had for some time there an excellent channel, 25 feet deep, but this has gradually filled in in places. It was thought at first that silt from the Coos River had filled in the upper part of the harbor where the principal work is to be done. The principal channel of the Coos River is along the north bank of the bay, however. The silting up of the channel is rather due to the subsidence of the sides of the cut.

The people have taxed themselves to the limit. They can not expend on the inner harbor at present more than the \$650,000. That is as far as their taxing ability extends. They ask the Government now to reopen this channel. They desired the Government to maintain a 25-foot channel, but the engineers have concluded in looking over the situation that a 22-foot channel would be sufficient for present purposes. That will give them a channel of 22 feet from the bar to Smith's mill of a sufficient width, from place to place, to accommodate the traffic. The proposed restorative will remove the material that has silted in from the banks of the original cut; and when that is taken out, the banks having now assumed practically, or very nearly, a natural slope, will maintain themselves. After this first amount is removed it may be necessary to make a second smaller excavation as the banks may silt in a little more. This however will amount to little more than maintenance, if any. This will make a practicable channel there of 22 feet, all the way from the entrance to Smith's mill.

The business of Coos Bay has increased during this last year wonderfully. It is one of the liveliest spots on the Pacific Coast. They have two or three shipyards there, and sawmills which were running to full capacity sawing spruce and other timber for Government and other uses. They were building several new enterprises that have relation either to shipbuilding or lumbering, and some other industries which have developed since that time.

The amounts of tonnage specified in the latest report of the Chief of Engineers is the amount reported as of the end of the last fiscal year, and does not show the amount of business now on the Coos Bay. I think the tonnage this year will be the greatest ever on the bay. I earnestly urge the adoption of this project and I believe the committee will agree that good business prudence will dictate that this channel obtained at so large a cost should be preserved.

There is \$40,000 estimated here for the maintenance of the bar. The dredge *Michie* is doing good work and they have an adequate amount of water on the bar for vessels either coming in or going out at all stages of the water, sufficient to accommodate the traffic. But they need this inner harbor. They have more water on the bar in proportion than they have in the inner harbor at present. But the inner harbor depths to accommodate the traffic must be at least 22 feet. Now the Government has spent practically nothing on the inner harbor; just a very small amount. The people have spent \$650,000, and they ask that the Government adopt the present project, and make it a 22-foot project.

The CHAIRMAN. Adopt the new project, you mean?

Mr. HAWLEY. Adopt the new project; I mean the present project which the people have made, the one actually in existence.

The CHAIRMAN. On page 1673 of the last annual report, in the paragraph "Condition at the end of the fiscal year," in this language:

Since 1891 about 850 acres of the North Spit has been reclaimed by planting Holland grass thereon.

What kind of a grass is that? And in what way was it reclaimed by this grass. It is a very interesting statement, and I do not understand it.

Mr. HAWLEY. This is a sand spit and the sand is moved by the action of the wind from place to place, and finally drifts over into the bay unless prevented. This Holland grass is a little wiry grass that grows in clumps, keeps spreading, and forms a binder on the top of the sand. It is the only grass, I think, that will grow where the moisture it uses is derived from salt water. It forms a binder and prevents the drifting of the sand.

The CHAIRMAN. That is quite interesting. I know there is a Bermuda grass which is sometimes used in the East here for holding sandy places together. I am not sure whether Bermuda grass will grow in salt water. I scarcely think it will. But this Holland grass, you say, will grow in salt water?

Mr. HAWLEY. Yes; it grows where its moisture supply is derived from salt water.

Mr. BOOHER. I see in the Book of Estimates here, I think for the Coquille River, there is \$45,690 on hand for this year. Is not that enough to carry on the work?

Mr. HAWLEY. I think that, Judge Booher, if my memory is not at fault at the moment, is the balance that was left over for the improvement of the north side of the entrance, to prevent the sea from cutting across above the lighthouse. Is not that right?

Col. NEWCOMER. That is right, and of course it is only available for the existing project; not for a new project.

Mr. BOOHER. Is the new project you are asking for on the Coquille River a different project from the one in the book here?

Mr. KENNEDY. He said it was in Document No. 70, which is a new project.

Mr. BOOHER. That is a new project.

Mr. HAWLEY. Yes. Just one word further about Coos Bay. It seems to me, and I think you gentlemen will agree with me, that it would be unfortunate for a community to expend \$650,000 to get a good channel and then, for the lack of a small subsequent expenditure, to have that channel lost to public use.

The CHAIRMAN. You are speaking of the bay there?

Mr. HAWLEY. Yes; the inner harbor.

The CHAIRMAN. The present project is 18 feet?

Mr. HAWLEY. Yes; the present Government project is 18 feet; but the real channel is the one made by the people, as explained above.

The CHAIRMAN. It is proposed to maintain that, but now you are asking for a new project which proposes to increase the depth to 22 feet.

Mr. HAWLEY. Yes; it would be of no value for the Government to appropriate money for the maintenance of only an 18-foot project, for there is no 18-foot project there.

The CHAIRMAN. You mean to say that you have a minimum of 18 feet already?

Mr. HAWLEY. Yes, and they want a minimum of 22 feet. Vessels carrying two or three or four million feet of lumber, which they desire to use, can not operate in an 18-foot channel.

Next is the Siuslaw River project. That is in House Document No. 173 of this Congress and in the Engineer's Report for 1917, at page 1714. At present there are no mills operating on the Siuslaw. There is a mill there at Florence ready to operate, but the river has formed a shoal between Florence and the mouth of the river. This new project is to remove this shoal. It is not an expensive project and will make available for use the costly improvements heretofore made to their fullest extent.

I had a telegram recently from the people stating they had raised the money to build a shipbuilding plant and that other industries were preparing to come in. This is a case where they have had business enterprises that are now temporarily closed down by reason of the shoaling of the river, and the people, you will remember, have put in there a large amount of money—something like three or four hundred thousand dollars—in the improvement of the river in cooperation with the Government. But they have gone as far as they can; they have taxed themselves to the extent of their ability to tax, and are now asking the Government to adopt this new project at a cost of \$35,300 to help them out and make available for use, make really serviceable for use, the improvements heretofore made at a great expense of the Government and the locality.

The Yaquina bar and harbor is a new project also, favorably reported on by the engineers in House Document No. 109, Sixty-fifth Congress, first session. The people there have formed two ports, the Port of Yaquina and the Port of Toledo, which have agreed jointly to tax themselves for an amount a little over \$200,000 each to extend the jetties and improve the entrance and harbor. They hope to get 20 feet of water on the bar and a suitable amount of water inside. There is very little work to be done on the inner harbor. I was over it this last fall, and the captain of a boat that plies between Yaquina and Newport has practical information as to the depth of the water in the harbor, as he has navigated it for many years. He said they only had a few places where there is less than 20 to 22 feet of water and only short cuts had to be made.

The principal work to be done is on the jetties and the bar. I was at a meeting of the two ports at Toledo in October when they agreed to issue \$75,000 of bonds each. The people have already voted the bonds, so that the ports can issue them at any time. And I received a telegram just recently that they have done this. They have made a contract with a gentleman named Wright (I think he is an officer of the Army Engineer Corps), and upon the plans prepared by and under the supervision of this officer the people have begun or will begin shortly the improvement of the south jetty, with \$150,000 available for work during the coming year, and they propose to continue the work.

(This is the telegram referred to:)

TOLEDO, OREG., January 4, 1918.

W. C. HAWLEY,
Congressman, Washington, D. C.:

Ports of Toledo and Newport have entered into contract with responsible company for the building of the south jetty at the entrance to Yaquina Bay, Oreg., according to plans and specifications recommended by the Secretary of War to Congress by Document No. 109 (65th Cong., 1st sess.). We earnestly request your support in securing an appropriation at this session of Congress to carry on this work the coming year.

LEE WADE,
Joint Secretary for Ports.

There are over 13,000,000,000 or 14,000,000,000 feet of timber immediately tributary to this port. Several companies have filed telegrams with the Board of Engineers for Rivers and Harbors pledging their faith to the board that as soon as there is adequate water on the bar they will build mills and ship lumber out from that point. One will immediately build a mill cutting 50,000 feet of lumber per day, and others will build mills of similar proportions. They are asking Congress to appropriate a small amount as an initial appropriation, and the Board of Engineers for Rivers and Harbors has suggested \$100,000 for the first appropriation. Mr. Wright, the engineer, said the first year's work would probably cost \$200,000; so with the people providing \$150,000, if the committee adopt the project and provide \$50,000, that will carry the project through for the first year, and I earnestly hope this will be done.

Mr. BOOHER. What project is that?

Mr. HAWLEY. That is the Yaquina bar and harbor.

Mr. SWITZER (entering). Where is that located? Where is that, on Coos Bay?

Mr. HAWLEY. That is north of Coos Bay. Do you remember where Albany is, or do you remember where Salem is?

Mr. SWITZER. No; we just went as far north as Crescent City, and then went inland; we did not go to Coos Bay.

Mr. HAWLEY. It is about 100 miles south of the Columbia. It is the natural outlet for the middle and southern parts of Willamette Valley. Years ago, before the Southern Pacific acquired the railroad that now runs from Albany over to Yaquina, the farmers received about 5 cents more per bushel for their wheat by sending it out through Yaquina than they did by sending it out by Portland and by Columbia. When the Southern Pacific took over the road they sent the freight north. It is the natural outlet for the middle and southern parts of the Willamette Valley, and if the bar and harbor are improved, it will be of great value to the people all through that part of the State of Oregon. The lumber will produce a large tonnage also; of this there are immense quantities, including some of the finest spruce on the coast.

The CHAIRMAN. Is there any water terminal at Yaquina?

Mr. HAWLEY. Yes, the port of Newport has acquired a tract of land there and have already built a very good public dock; and large for the place—a public dock that is open to the people.

The CHAIRMAN. Owned by the municipality, is it?

Mr. HAWLEY. Yes, owned by the port which is a municipal corporation under the laws of the State of Oregon.

The CHAIRMAN. It is a public corporation?

Mr. HAWLEY. It is a public corporation, and this is to be a dock open to the public on equal terms.

Mr. FREAR. What is the depth of water there now?

Mr. HAWLEY. They have from 14 to 16 feet on the bar, and it is principally sand between that and the 20 foot depth.

Mr. FREAR. What is the first harbor below the Columbia, the mouth of the Columbia, that will accommodate the largest vessels?

Mr. HAWLEY. The first harbor below Columbia is the Nehalem.

Mr. FREAR. What have they?

Mr. HAWLEY. They have from 15 to 18 feet of water.

Mr. FREAR. Which way is that from this place?

Mr. HAWLEY. That is north of this. Then comes Tillamook, where they hope to get 20 to 24 feet of water. The jetty is just being completed; I think possibly the last rock was put in this summer. And then comes the Yaquina.

Mr. FREAR. And then Coos Bay?

Mr. HAWLEY. No. Below Yaquina is Aslea, Siuslaw, and then Coos Bay.

Mr. FREAR. Coos Bay is the first harbor that will accommodate large vessels?

Mr. HAWLEY. It is the first harbor that will provide water for vessels of more than 25 feet draft at this time.

Mr. FREAR. For more than 25 feet?

Mr. HAWLEY. Yes.

Mr. FREAR. What harbors will accommodate 25 feet?

Mr. HAWLEY. I think I should say for more than 20 feet draft at present.

Mr. FREAR. I was just trying to follow that.

Mr. HAWLEY. Yes.

Now, for the Columbia River there is the usual appropriation for maintenance and operation. I think I will make no comment on that. The committee is very well acquainted with that.

The locks at Oregon City were completed this summer and those locks have now become free and open to the public. The Willamette River needs some amount, as all silt bearing streams do from time to time to maintain the improvement on the upper river so that the people can profit by the improvement made on the locks of the river.

Then, there is the Clatskanie River. There is a present project of maintenance of \$1,000, and a proposed new project of \$4,620, which is to cut through a bank from the end of the present project into the deep water of the Columbia. It is a very small item and will do a very great deal of good for that section of the country. The people there have already spent a good deal of money in the maintenance of that river as stated in the engineer's report and the money has produced results that have been satisfactory for the amount of money expended.

I beg to express the fervent hope that this committee will see fit to adopt all the projects I have mentioned in my brief remarks and I am very grateful to you gentlemen for the courtesy of the hearing. In every instance the people have or will cooperate with the Government by the contribution of large sums to aid in the improvement of the projects. Each project is a worthy one, intended to effect a material and profitable development of commerce. And I call the committee's attention specially to the urgent need at this time of the improvements proposed.

The CHAIRMAN. You have presented the matter very systematically and intelligently. If you do not get them from the committee it will not be your fault.

Mr. HAWLEY. I thank you very much, Mr. Chairman.

(The committee thereupon proceeded to the hearing upon the estimates.)

RIVER AND HARBOR APPROPRIATION BILL

HEARINGS

ON

H. R. 4285

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
MURRAY HULBERT, New York.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.

HUBERT F. FISHER, Tennessee.
CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
ALLEN T. TREADWAY, Massachusetts.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.

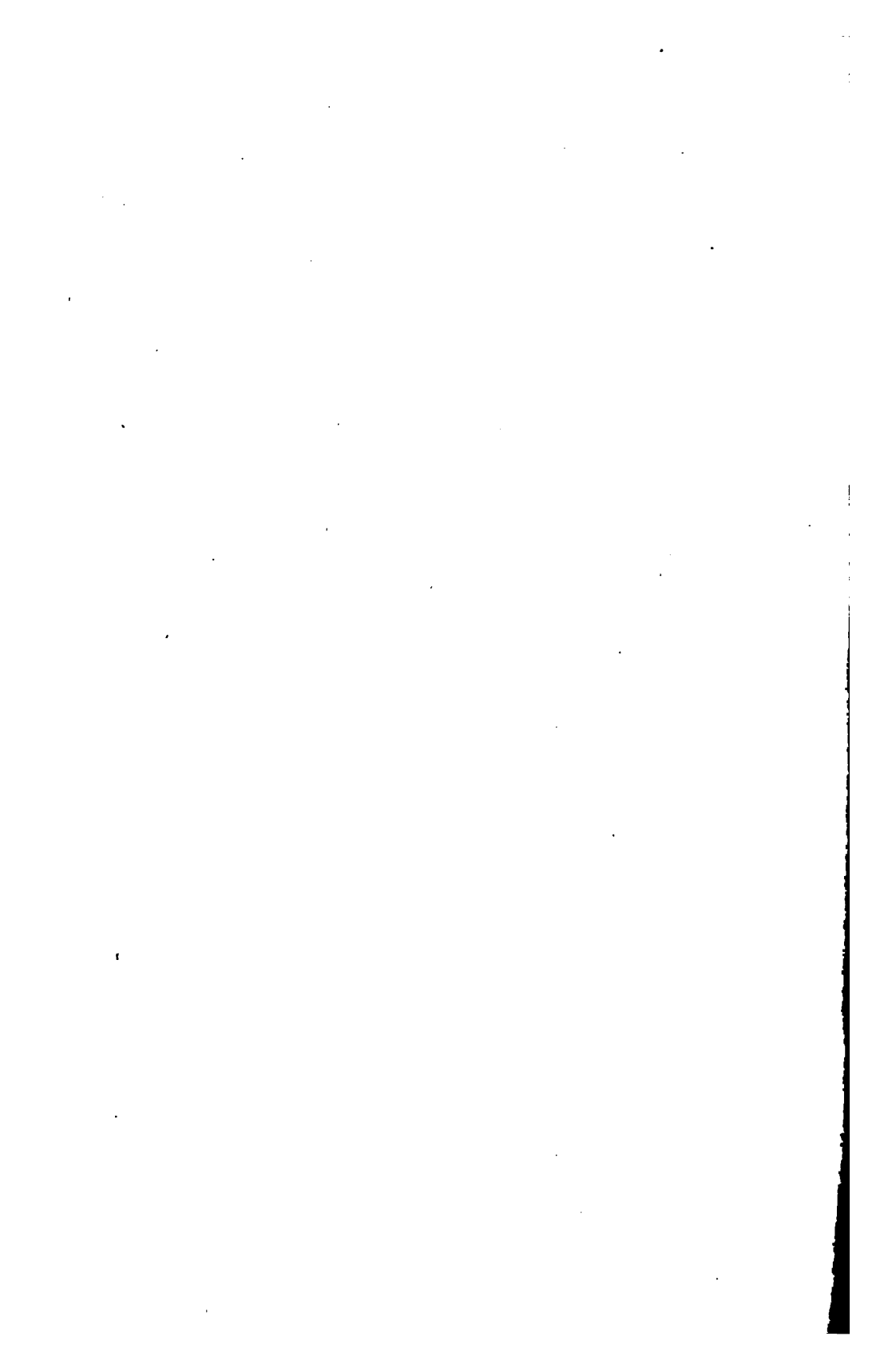
WILLIAM C. BROOKER, *Clerk*.

JOSEPH H. MCGANN, *Assistant Clerk*.

MAY 1, 2, 3, AND 5, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917



RIVER AND HARBOR APPROPRIATION BILL.

COMMITTEE ON RIVERS AND HARBORS, HOUSE OF REPRESENTATIVES.

Tuesday, May 1, 1917.

The committee met at 10 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. Gentlemen, we have with us this morning Col. Newcomer, from the office of the Chief of Engineers, and, unless the committee directs otherwise, we will take up these recommendations, made by the Secretary of War, in the order as they appear in the recommendations which have been printed.

Col. Newcomer, the Secretary of War has submitted certain recommendations to be included in a river and harbor bill at this session for maintenance and improvement. Will you kindly state upon what basis or conditions these recommendations were made?

STATEMENT OF COL. HENRY C. NEWCOMER, OFFICE OF THE CHIEF OF ENGINEERS.

Col. NEWCOMER. Mr. Chairman, I will state that these recommendations originated from a recommendation made by the Chief of Engineers to the Secretary of War at a time when it appeared very doubtful whether any river and harbor legislation would be enacted this year. He felt that the situation of the general transportation service of the country was such as to require some work, not only for the more urgent commercial needs but also for certain military purposes as a matter of defense. For that reason he prepared a brief memorandum, which he took up to the Secretary of War, accompanied by a copy of the bill. He took this Senate bill as the basis for his action, and in arranging the program for the more urgent military and commercial needs we struck out the items which we felt might be omitted at this time. We do not mean, of course, that we consider those items that were stricken out unimportant or not useful, but they were simply considered as ones that might be eliminated in the process of pruning in order to get down to what might be considered as the essentials most necessary at this time. That memorandum and the proposed schedule of items were taken by the Secretary to the President, and it was understood that they received his assent. In fact, we were convinced from what took place later that the administration was quite willing to have a bill substantially the same as the bill as it passed the House and was amended by the Senate Committee on Commerce.

Mr. FREAR. At the last session?

Col. NEWCOMER. Yes, sir; at the last session. But further consideration led to a modification of that attitude, and a reversion to the first one of taking care of only the more urgent cases.

Mr. TREADWAY. As I understand it, this started with the Chief of Engineers having a brief memorandum, as you stated, and then you supplemented that with the list contained in this bill?

Col. NEWCOMER. It was a brief memorandum, or simply a statement calling attention to the necessity of making some provision for these matters.

Mr. TREADWAY. Was that an itemized statement?

Col. NEWCOMER. No, sir; it was simply a brief memorandum referring to the general situation, and it was accompanied by this itemized list just as you have it here. That list contains all the items that were in the bill as it was reported to the Senate by the Senate Committee on Commerce at the last session. We have simply stricken out some of them. We have simply crossed out with a pencil the ones that we felt might be omitted in the present emergency. That list, as I said, accompanied the memorandum, and it was the one that went to the President.

Mr. TREADWAY. The reason I asked that question was that I saw in the press about the time of this conference—but that, of course, does not make it in any sense official—a list which was approved, as I understood it, by the Secretary of War. It was a very brief list of some important harbors of the country which were approved by the Secretary of War for appropriation at this time. Now, was that the memorandum that you have referred to?

Col. NEWCOMER. I hardly think so. That was one submitted by the Secretary of War with reference to channels required by the fleet of defense, was it not?

Mr. TREADWAY. I think so.

Col. NEWCOMER. There was in last year's naval appropriation act a provision requiring the Secretary of War and the Secretary of the Navy to report to Congress as soon as possible the additional work required for harbor and channel improvements required for the operations of the fleet of defense. In response to that provision of law the matter was taken up, first by the joint board of the Army and Navy, which approved, as the basis for further action, the report which had already been made by the General Board of the Navy, in which they discussed that situation and took up certain localities which they said should receive additional improvement for the operation of the fleet of defense. That was simply submitted as an ordinary congressional document and is not especially involved in this. Some of the items that were in that program are not in this bill, although there are some others that are included. As a matter of fact, there is only one of those items that is really included in this bill, and that was in the bill as introduced last session in the Senate. The question as to who should take up those items for the purely naval defense was a question that we did not think should come before the department.

In other words, I mean by that that the information has been sent to Congress, and whether they will appropriate for it in the naval bill or in some other bill, we do not know, because it is not strictly speaking river and harbor improvement. For instance, for the East River, New York, the Navy Department asked for a depth of 4

feet to the navy yard, while we had proposed 35 feet. Thirty-five feet is ample for all commercial needs, but the Navy wants the greater depth and, primarily, that should be provided for from some other fund than the river and harbor fund, because the latter is intended mainly for commercial needs. We have already reported to Congress that a depth of 35 feet in the East River is desirable for commercial needs. [Attention is invited to Col. Newcomer's testimony on May 3, from which it appears that it had been the Chief of Engineer's intention to include in the bill all the items reported in Senate Document No. 3, Sixty-fifth Congress, first session, as required now for naval defense, but through misunderstanding this was not done at first. The matter was corrected by amendments to the bill proposed on May 3.]

Mr. HULBERT. Why do you say that 40 feet is more than the commercial needs require in that river?

Col. NEWCOMER. It is because they do not need any more than that in the East River.

The CHAIRMAN. I suggest that we permit Col. Newcomer to make his general statement before taking up the specific items.

Col. NEWCOMER. I might state, to supplement the outline I have already given, that this matter, of course, had to be taken up rather hurriedly, and the result does not necessarily mean that the items omitted were not advisable at this time. A final survey of the whole situation might possibly indicate otherwise. As a matter of fact, after submitting that first list, the matter was taken up with reference to a few improvements which were modified. For instance, there was put in the item for the improvement of the mouth of the Brazos River, and that was done on account of the sulphur situation. Our first information did not indicate that it was essential at this time to make any further provision for that, because we did not appreciate at that time the extent to which sulphur enters into the munitions industry. Heretofore the ore used in the manufacture of sulphuric acid had been obtained mainly from Spain, but on account of the lack of ocean freight-carrying ships they could not get pyrites from abroad, and they now are forced to use sulphur. We put in that item for the improvement of the Brazos River for that reason, because that is one of the two places where sulphur is obtained in this country. There may be other instances where more thorough information might lead to modifications, but that list represents the best judgment of the Chief of Engineers based upon the information he had at the time it was prepared.

Mr. FREAR. May I inquire what is the total amount carried in this bill?

Col. NEWCOMER. The total amount is, I think, \$26,897,000.

Mr. FREAR. And from that has been deducted the Mississippi River item?

Col. NEWCOMER. No, sir; the Mississippi River item was not included in this bill.

Mr. FREAR. But that has been deducted from the old bill.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And this, also, as near as I can ascertain, deducts the amount that was carried for the Chesapeake & Delaware Canal?

Col. NEWCOMER. We took the Senate bill in that respect. In other words, we took the Senate provision for the condemnation, with a small appropriation to cover the expenses of condemnation.

Mr. FREAR. What was the total for that in the House bill—\$1,300,000?

Col. NEWCOMER. It was \$1,300,000 as it passed the House.

Mr. FREAR. I think we will have to have this preliminary understanding of the matter so that we may get the views of the engineers.

Col. NEWCOMER. I might state this, that no amount reported as required for maintenance was cut out, and the only eliminations were those new projects which we considered not of a really urgent nature, or not of such an urgent nature as would require their insertion in the bill at this time. We did that with a view of cutting down the total. Then, also, there were a few works of improvement that had already been authorized where the amounts for further continuing improvements were reduced or eliminated, because those were works that we did not consider as entering so strongly into the necessities of the case at this time. There were other works where the appropriations were continued because we felt that where the Government had embarked upon an improvement of a very extensive and costly nature, the work should not be allowed to lag. For instance, there is the work on the upper Mississippi River, where, as you know, they are having conferences with a view to developing the traffic. There is a conference to be held next Tuesday in St. Louis on that subject, which will be attended by the governors from all those States that are interested. As you know, they have built some docks at Minneapolis, and the same thing has been done at Dubuque. St. Louis is doing the same thing, and earnest efforts are being made to actually utilize the waterway.

Moreover, that is being done in connection with the present effort to coordinate all the transportation agencies of the country. That is being done very effectively under the direction of the railroad officials, so far as the railroads are concerned, but they have apparently paid very little attention to the waterways, and an effort is being made now to secure such coordination between the waterways and railroads as will assist in relieving the rail congestion and in improving the general transportation service. Take, for instance, the Mississippi River: That river is capable of carrying a large amount of commerce that would considerably relieve the congestion on the north and south lines of railroad.

Mr. FREAR. There is no freight line operating on the upper Mississippi River.

Col. NEWCOMER. Yes, sir; I think there is one.

Mr. FREAR. No; that is a passenger line, and it depends upon passenger traffic and excursions for its revenues.

Col. NEWCOMER. There is no barge line there at present. We do not look upon the boats running there now as being very useful in a large way as a freight-handling agency. Of course they handle some freight in the way of express freight, which is important. But if you will take any development of waterway traffic on a large scale you will find that it will probably have to come in the way of barge traffic, and that is just what we are trying to get at, as they have done on the Missouri River, for instance.

Mr. FREAR. I would like to ask some questions touching the matter of policy in the submission of these items. I notice that in a good

many of these items you have joined quite a large number of projects—that is, projects for maintenance. Take page 2 of the bill, for illustration, and you will find in the first item about a dozen projects, whereas there were only two of them in that item in the former bill as it passed the House. Now, I am asking that for the purpose of ascertaining what is the reason for the other 10 being placed here. For instance, in this particular case, what is the purpose of using any part of this fund for Gloucester?

The CHAIRMAN. In answer to that question will you state what was the policy adopted and the reasons for it?

Col. NEWCOMER. The purpose of grouping or consolidating items which are in the same general geographical location, and always grouped according to the engineer districts in which they are now included, was to get a more advantageous and economical use of the funds provided. It is obvious that in making estimates a year ahead, and generally a year and a half in advance of the time when the funds are to be supplied, we can not foresee what the needs will actually be. We have to make more or less of a guess based upon our past experience as nearly as we can make it. Now, when a fund is estimated for a particular work and is appropriated specifically for that particular work in the law, it is not applicable to the work provided for in any other fund, and therefore shifting needs, as they may develop with the passage of time, can not be met by any shifting of the funds. There is no reason at all that we can see why it would not be advantageous to have certain groups of improvements in that way, or why we should not have an emergency fund available, so that we might apply so much of it as might be necessary to the need as it develops. In the long run it will obviously require a smaller amount of funds to be set aside for a project if it is done in that way than if you specifically provide for each one.

Mr. FREAR. Suppose it was the judgment of the committee that one or more of the items carried in this group of items, or in this consolidation of items, was more important than the others, or that some ought to be appropriated for and others stricken out, under this method what means could be adopted by the committee in preparing the bill? This, as I understand it, is a new proposition, except in so far as it was begun to a small extent in the last bill.

Col. NEWCOMER. It was not only adopted in the last bill, but it has been practiced to a certain extent for a number of years. It has proved so useful that we think it is a good policy to have it this way.

Mr. FREAR. But if the committee differed from the engineers, let me inquire how could we determine what should be stricken out or should be added to? Suppose, for instance, we wanted to add to it.

Col. NEWCOMER. That could very readily be done.

Mr. FREAR. How could we determine it?

Col. NEWCOMER. Simply by leaving out the names.

Mr. FREAR. But there is no statement of the amount that shall go to each project. That is left to the engineers. You will find that provision on page 27 of the bill.

Col. NEWCOMER. That can be done very readily in this way: In the first place, I might state that we propose to cover each item in the annual report, showing with respect to each locality the amount that

is proposed to be used there both for maintenance and for work of improvement.

Mr. FREAR. Then afterwards you have the right to make a change or to make a new allotment under this provision on page 27 of the bill?

Col. NEWCOMER. Yes, sir; we ask for that right in order that we may shift the funds to meet shifting needs.

Mr. FREAR. I am giving you the committee's position. The committee would simply appropriate that lump sum to the engineers to distribute as they deem best.

Col. NEWCOMER. Substantially so. But to meet your other question, the committee can very readily control the thing down to the least detail, if they desire to do so, by simply stating for the maintenance of such a harbor so much, and you could, of course, withdraw that general provision if you think we can not be trusted with the distribution of that fund to meet the shifting needs.

Mr. FREAR. If the engineers could have been trusted all these years in the past, why were they not trusted? As a matter of fact, the committee has hitherto reserved to itself the right to say how much shall be expended for the maintenance or improvement of each one of the various projects.

Col. NEWCOMER. I do not think the committee has done that in the past. It has not been so insistent about questions of maintenance as it has about questions of improvements. In other words, the maintenance funds have nearly always been granted, I think, without much question, and it is only the question of how rapidly improvements shall proceed that the committee has been insistent about. You will notice that we have discriminated here as between maintenance and improvements. The maintenance fund has been put in a lump sum for all the projects, and then we have stated, "for the improvements of such a project or locality, so much." Of course, if the committee pleases or if Congress pleases, we could be limited to that amount, and the discretionary power could be withdrawn, but I do not think that it would be at all dangerous to allow it.

Mr. KETTNER. The committee last year discussed this problem on several occasions, and we were generally agreed upon the proposition that we should turn over lump sums to the engineers for maintenance. This matter was discussed on several occasions last year.

Mr. TREADWAY. Before the colonel leaves that question that Mr. Frear brought up in connection with the grouping system I would like to ask his interpretation of the sentence in line 18, on page 27, where it refers to these projects, both individually and in groups. The language I refer to is as follows:

In case such works or items are consolidated, and separate amounts are given to individual projects, the amount so named shall be expended upon such separate projects unless, in the discretion of the Chief of Engineers and the Secretary of War, another allotment or division should be made of the same.

What is your interpretation of that sentence, "Another allotment or division should be made of the same"?

Col. NEWCOMER. That provision is copied verbatim from the provision which accompanied the former consolidation of items, and I understand that its purpose is to permit the Engineer Department to readjust the funds where the needs show that the funds provided for

one project, for instance, is not required and it is needed for another. For instance, take the improvement of the upper Hudson River. There is a case where the improvement has been estimated to cost so much, but it looks now as though we would save quite a little sum there on that improvement. If there were some other works grouped with that the sum not required for the upper Hudson improvement could be applied where it was needed. I do not recall that such a diversion has ever been made, but it is something that might be useful under certain conditions.

Mr. TREADWAY. Would it not practically mean that in spite of the individual appropriations for maintenance, or in spite of the groups as you have arranged them, there would still be discretionary power in the hands of the Chief of Engineers or the Secretary of War to practically lump the entire number of items and say, "We do not need it here, and therefore we will spend it there"? It does not look to me as though that places it so that you would be required to use it for items in a given group. For instance, Mr. Frear has referred to that item of \$24,000, on page 2, which is the first item in the bill; \$24,000 is estimated there for those various items, but as I interpret the language I have just read, on page 27, if you did not want to use that money on any of those items mentioned there you could expend it under the third item there on account of the various items in Connecticut?

Col. NEWCOMER. No, sir. This language simply means liberty of transfer or readjustment as between items in that particular consolidated list, and not as between different groups.

Mr. TREADWAY. That is what I wanted your interpretation of. I should construe that to mean that you could use it anywhere.

Col. NEWCOMER. It is confined to the group, and, of course, it is to be assumed, I think, that the department, in carrying out the will of Congress as expressed in the law, would have to carry out that intent so far as the circumstances would permit. It is only in view of changing circumstances that they would ever make any readjustment of that. This is simply to give discretion to the department to meet shifting circumstances. I think the engineer department has the reputation with you people, as a rule, of living up to the intent of the law as we understand it. We do not try to evade it, I think, in any case.

Mr. COSTELLO. I notice that for the improvement of these various projects in the new bill there is a very material reduction from the amount that is carried in the old bill for the different projects that are grouped in the new bill. Now, I interpret that to mean that the War Department is going to expend just sufficient money to maintain the work that has already been done on these different projects to save them from deteriorating and for the purpose of maintaining them, and the idea was to enable you to have enough money allotted to take up whichever projects required your attention within the amount of the appropriation as a whole.

Col. NEWCOMER. That is substantially the case, except in this respect, that reductions have not been made in the amounts required for maintenance. Those were ordinarily reduced originally as far as we felt that they could be reduced, but the reductions here are in the amounts for further improvement.

Mr. HULBERT. I would like to know where it is reduced.

Mr. GALLAGHER. This language reads:

Any balances remaining to the credit of the consolidated items shall be carried to the credit of the respective aggregate amounts appropriated for the consolidated items.

That means if you have anything remaining over, then you could shift it to wherever you want to shift it for the consolidated items.

Col. NEWCOMER. Those balances left on hand in a group are credited to the group instead of to separate items and can be distributed as the needs of the work require.

Mr. HULBERT. I would like to ask one other question: When Col. Newcomer appeared before the committee last year, my recollection is that he stated that that \$24,000 was estimated in order to maintain the Mystic and Malden Rivers. Now, having included about 12 other items in that paragraph on page 2, I would like to ask Col. Newcomer whether he has found that he can consistently reduce the amount which he originally expected to expend on the Mystic and Malden Rivers?

Col. NEWCOMER. It is not expected to reduce that at all, but it is expected that the \$24,000 will be used on the Mystic and Malden Rivers.

Mr. HULBERT. Then, these other items are simply surplusage.

Col. NEWCOMER. No, sir; because it brings those new items into a different situation. If you will look at our annual report for last year you will find that those items are carried in the annual report, but in estimating for additional funds no estimate for them was made for this year, 1918, because none was required. Now, the grouping of these items together would make available the use of this \$24,000 for any of these items as conditions may require. In other words, as a matter of fact, we might expend, and under this authority we could expend, some of that fund for other work if changing conditions should make it necessary.

Mr. HULBERT. In other words, the items included in the first paragraph substantially create a district, with the idea that the money allotted or provided for that district can be expended by you within that district wherever it may seem essential.

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. My recollection is that for a number of years there have been some groups of that kind.

Col. NEWCOMER. Yes, sir. For instance, this provision on page 27, about which we have been speaking, is copied practically verbatim from the river and harbor act of 1912, which consolidated quite a number of items in different parts of the country. This is simply a further use of the same methods that were adopted at that time for certain localities.

Mr. TREADWAY. The act of 1912 specified where those consolidations should be, did it not, or was it a general provision?

Col. NEWCOMER. That act consolidated a number of items by arranging them in groups. It also had this general provision like the one on page 27, and in that case it was made a part of the first section, to indicate that where items were so consolidated the funds should be handled in the way described.

The CHAIRMAN. I think there were about 16 consolidations or groups in the last bill reported by the committee and as it passed the House.

I would like to say just a word which might amplify and further explain what Col. Newcomer has stated: The grouping here only includes items of maintenance, and where there is included in a group any appropriation for improvement, it is so stated specifically, and in that case the appropriation is limited to that specific item of improvement.

Mr. HULBERT. Suppose there is a balance?

Col. NEWCOMER. As a general proposition, it does give discretion, undoubtedly, to the Secretary of War and the Chief of Engineers to readjust these funds if the circumstances change.

The CHAIRMAN. For instance, you might complete a project with a sum less than the amount estimated or appropriated, and, if so, the surplus could be used for any specific item or items in that group where it should be necessary to use it.

Mr. GALLAGHER. Before Col. Newcomer gets away from his general statement, I would like to inquire whether he has a copy of the letter that the Chief of Engineers sent to the Secretary of War?

Col. NEWCOMER. No, sir; I have not, I am sorry to say. That was a typewritten sheet of not more than two pages.

Mr. GALLAGHER. Can we have a copy of it?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Do I understand that if in the performance of a given improvement there were to be a saving—and, as I recollect it, there was in one case a saving of \$1,500,000—do I understand that upon the completion of such a project the balance would remain to the credit of that particular group of projects or the district?

The CHAIRMAN. If such should be the case, but you will find that these items for maintenance are comparatively small.

Col. NEWCOMER. Yes, sir; as a rule. Very few of these items involved here are large.

Mr. HULBERT. Would it not follow that in a harbor like New York, where you have several tributaries, that the balances would be credited to them?

Col. NEWCOMER. We have not grouped those extensive works. As a matter of fact, in New York there are three districts, and, as a rule, we do not want to group together works that are in different districts and thereby involve a transfer of funds between different disbursing officers.

Mr. OSBORNE. Under this item that has been referred to in the first paragraph, for the maintenance of the Mystic and Malden Rivers, as I understand it, there are some small unexpended balances for maintenance in these other places?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. Now, is it necessary in the handling of these unexpended funds that these names should be included in this bill?

Col. NEWCOMER. To get the authority that is given by this bill—yes, sir; certainly. Otherwise we could not, of course, divert anything from Gloucester to Beverly.

Mr. OSBORNE. Could you not apply this fund to the credit of Gloucester? Couldn't you apply that without this new legislation?

Col. NEWCOMER. We could only apply the unexpended balance for Gloucester to Gloucester, of course.

Mr. OSBORNE. Without this legislation?

Col. NEWCOMER. Yes, sir. It should be noted that all of the funds appropriated by the river and harbor bill are available until expended.

Mr. HULBERT. This proposed legislation would permit the transfer of unexpended balances to the credit of Gloucester so that they might be expended in the improvement of the Plymouth River or harbor.

Col. NEWCOMER. Our attitude toward this is such that we would ordinarily use that liberty only in the case of maintenance funds. I think it would be very rarely the case that we would transfer funds that had been appropriated for improvement.

Mr. HULBERT. The unexpended balances there, together with that \$24,000, will go into one general fund, and the engineer could expend that with regard to these items in the first group as in his judgment seemed proper.

Col. NEWCOMER. The procedure would doubtless be this, under this provision of the bill, if it should be enacted into law: All of the sums remaining to the credit of these different places would go to the credit of the consolidated group and would then have to be reallotted. We would doubtless at once reallocate each one of those sums back to the item from which it was taken, and it would be only in case of changing circumstances which would indicate that the transfer should be made that the transfer would be made. If this policy should be carried out the amounts to be appropriated would be based upon itemized statements in the annual estimates for maintenance which would give the amounts we expect during the year to apply to particular localities. Each one of these items and the explanation of it is printed in our annual report. In other words, Gloucester here would be reported upon as a separate project, and Beverly would be reported upon as a separate project. Each one would be reported upon separately. We would give a statement of the funds allotted to them, and of the additional amounts required, but this authority, as I have said, is needed to meet situations that we can not anticipate in advance.

Mr. HULBERT. What is the total amount carried in this bill for maintenance? Have you a separate statement of that?

Col. NEWCOMER. I do not have that.

The CHAIRMAN. If Col. Newcomer will permit the interruption—

Col. NEWCOMER (interposing). Perhaps Mr. Brooker may know how it is divided.

Mr. BROOKER (the clerk). \$5,114,000, which is exclusive of the items for which appropriations are made for improvement and maintenance in an undivided sum.

Col. NEWCOMER. There are a few cases, but only a few, where the item is for continuing improvement and maintenance, where the district officer did not submit them in such a way that we could separate them here. The total just given is substantially the sum required for maintenance.

Mr. HULBERT. The principal reduction in this bill is from the elimination of new projects carried in the bill passed last February.

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. So long as you are going to keep the accounts separately, so long as you are estimating separately, and so long as the

bookkeeping estimates and accounts are kept separately, what is the object of combining or grouping them in the bill?

Col. NEWCOMER. The reason is this, that as long as each work stands alone, without any possible assistance from other work, you are bound to estimate more liberally in order to meet contingencies there. If you do not, you must run the risk of suffering a deterioration which is going to embarrass commerce very seriously. Therefore you must estimate rather high. Now, we expect that the introduction of this system will permit a reduction in estimates and appropriations, because by getting eight or ten localities in a group like that we would be enabled to meet the increasing needs of one project by the diminishing needs of another. Therefore you can estimate on a more moderate basis.

Mr. DEMPSEY. By making transfers from one fund to another?

Col. NEWCOMER. Yes, sir. We have not this year made any reduction in the amount estimated for maintenance under the old system, but in the future we expect to do so. That was because these items were not originally considered by groups in preparing the annual estimates or the whole matter was not taken up from that point of view. This bill is based upon estimates made by the district officers under the old system; but under the new system, if adopted, we expect to be more moderate in our estimates for each locality, because, as I have said, you can handle the matter more efficiently under this grouping system.

Mr. OSBORNE. It seems to me that this would be a practical application of it: It so happens that Mr. Kettner's district and my district are in the same engineer district. Now, if Mr. Kettner in San Diego should have an unexpended balance from maintenance, the engineer of that district, if he should deem it wise to do so, could transfer that unexpended balance to the Los Angeles Harbor, could he not? He would have the right to do that, would he not?

Col. NEWCOMER. Yes, sir; with the approval of the Chief of Engineers and the Secretary of War. The district engineer could not do that alone.

The CHAIRMAN. There is one phase of this matter that it seems to me has not been specifically gone into. Now, in answer to particular questions by Mr. Frear and Mr. Hulbert—that is to say, to what extent are the functions of the committee invaded in fixing the gross amount to be appropriated for a group of items for maintenance—if I am correct in my view—and I think I am correct—there is no invasion here of the functions of the committee. In making up the bill, for instance, we come to a group, and we see in the reports of the Chief of Engineers that each item in that group is discussed separately. It is reported, we will say, as necessary for maintenance and is recommended. Now, there may be one or more items in that group for which no recommendations for maintenance are made. The committee will take up each item in the group; there may be four items, for one of which there is no recommendation for the appropriation of a maintenance fund.

For instance, the committee will take up item A and decide upon the amount there, and they would, as a usual thing, take the recommendation of the engineers. Then they would consider item B, and then they would consider in the same way item C. Then, having considered those three items, the amount appropriated would be the

gross amount of appropriation recommended by the committee for that group composed of four items. Therefore, the committee would have exercised its responsibility in fixing the amount of the appropriation, and they would have gone into each item separately in order to arrive at that gross sum. This consolidation only affects the administration of the works. When the Chief of Engineers comes to administer them it may well be that, while he may have recommended \$10,000 for item A, some conditions have arisen since his report which may show him that \$8,000 is sufficient. If so, the \$2,000 saved on item A, with the approval of the Chief of Engineers and the Secretary of War, may go to item D, the fourth item for which no recommendation was made, if, in the meantime, there seemed to be some necessity for it. Therefore, as I stated, the committee still preserves its function of making up or reaching its conclusion as to the aggregate amount needed, based upon the recommendations of the Chief of Engineers as to each separate project. This grouping affects only the administration of the work and the expenditure of the funds by the War Department.

Mr. HULBERT. You have stated that this grouping principle applies only to small items and not to the large projects. If that be the case the large projects are placed at a great disadvantage, because whenever it may become necessary to secure an allotment of funds in order to provide some additional maintenance for a large project, you would have to come to Congress and get a direct authorization for it, whereas, by grouping certain small projects together, if additional money should be required for any of them during a recess of Congress, it could be applied so long as there is a balance. The small projects, under this plan, will be in a position at all times to be improved with any balances on hand from the several projects in the group, whereas the large projects would have to come to Congress and get legislative action, and for that reason this system is unfair to the large projects throughout the country.

Mr. COSTELLO. Is it not a fact that the large projects are subject to appropriations made covering over several years, and that it would be practically impossible to get sufficient money in one Congress to complete many of them, whereas the small projects are capable of being treated finally by the action of one Congress? In other words, the larger contracts are carried on the basis of continuing contracts, looking to each Congress to appropriate sufficient money to do all the work that is possible to be done in one year.

Mr. KETTNER. In answer to my friend, Mr. Hulbert, I will state that Col. Newcomer has just stated—and I think he made it so plain that everybody should understand it—that where they have estimated for these small groups the department could make a great saving, but for the larger ones, the estimates are made in accordance with the requirements of such large projects.

Mr. HULBERT. The principle is the same in either case, is it not?

Mr. KETTNER. No. The department is trying to save all it can, and, by giving them authority to transfer these funds in certain sections, the estimates will be a great deal smaller than they would be if they were estimated for separately. The large projects, as Mr. Costello stated, are carried from year to year.

Mr. HULBERT. What is the difference in principle between making a specific appropriation to be allotted by the engineers in districts

and making a lump-sum appropriation to be allotted by the engineers all over the country?

Mr. KETTNER. The same difference there is in preparing for one small undertaking or several.

Mr. TREADWAY. Col. Newcomer, referring to your statement at the opening of the hearings, I understood you to say that you regarded this river and harbor work as largely of commercial value, and that you do not feel that the Board of Engineers should pass judgment on military or naval propositions in connections with river and harbor work. Am I correct in that?

Col. NEWCOMER. I think you are referring to the statement I made about the report on the work required for the operation of the fleet of defense. We do not, as a rule, in the river and harbor work give much weight to those other considerations, because the commercial considerations are usually the determining ones. In the East River the commercial needs appear to be the same as the navy's. For instance, the channel between East River and Hell Gate, the demands are the same, but we do not, I think, require the same depth through Diamond Reef where they ask for 40 feet, and where we report 35 feet as sufficient for commercial purposes. In this case a certain need exists for military purposes, but that is entirely aside from and distinct and apart from the need for commercial purposes. I do not know that we should include that in the river and harbor bill. We did not include it in the case of the Norfolk improvements nor the San Diego improvement, because it was not required for commercial purposes. That has nothing to do with this bill.

Mr. TREADWAY. Have you in any way arrived at a conclusion concerning the relative merits or importance of the items consolidated in this bill, other than by taking the arbitrary fact that they were carried in the last bill?

Col. NEWCOMER. We have in each instance some considerations that influenced our judgment.

Mr. TREADWAY. The bill we have before us now is practically the one that passed the House as it was revised by the Senate committee.

Mr. NEWCOMER. With a number of eliminations.

Mr. TREADWAY. So that really the bill itself has not been passed upon by the Board of Engineers from the viewpoint of better preparedness conditions?

Col. NEWCOMER. Of course the Board of Engineers has not considered it at all. It has only been considered in the office of the Chief of Engineers. We considered there not only items like that of the East River Channel, which has been one for both commercial and naval purposes, but there are other items of special commercial importance, such, for instance, as that question of fertilizers at Tampa. That is recommended because of the importance of transporting fertilizers. Fertilizers are considered to be a matter of special importance at this time in connection with the food question, and for that reason we included that item.

There is the case of the Brunswick (Ga.) Harbor. The additional depth recommended there did not seem to present a matter of urgent necessity, but it was more a question of greater convenience. You might say that it was more a question of convenience than of necessity. In other words, they have to go over the bar on the tides, and while they ought not to be subjected to that delay and interference.

they can accommodate themselves to that condition. In other words, the additional depth is needed there, but it is not considered absolutely essential at this time. So I would say that in each case there is some reason why we thought that an item should be included or excluded, as the case might be. That judgment, of course, is based upon our present knowledge of the situation, and it is quite possible that in some cases, on fuller information, we would reach a different conclusion; but we have done the best we could and we are quite willing in each case to tell you why we have included an item or eliminated an item.

Mr. TREADWAY. I did not intend to ask it, but since you have made that statement I will ask you why Boston was eliminated?

Col. NEWCOMER. For the reason that the new project proposed there was one to provide for a greater depth only at the outer entrance, which was rendered advisable on account of wave action. It does not give an increased depth to the docks at all, because the inside channels will remain at 35 feet, but solely for convenience in entering a port like that it is desirable to have an increased depth over the bar outside. It is only a question of providing greater convenience in getting in. It is a very desirable matter, but it is not a need of any urgent character. It is a case where a few hours' delay will enable them to meet the situation.

Mr. TREADWAY. That is the commercial situation?

Col. NEWCOMER. Yes, sir.

Mr. TREADWAY. You are not referring to the question of getting to the navy yard?

Col. NEWCOMER. It is the same thing in that respect. We do not require any increased depth to the navy yard. That depth is 35 feet.

Mr. TREADWAY. There are two or three more questions that I would like to ask. What is the need in this bill for items for surveys?

Col. NEWCOMER. We did not really pay much attention to the question of surveys. That is a matter that we did not consider especially important from our point of view. There are a great many of those items in here that appeal to me as being superfluous. At the same time they could be taken up if time permits. I do not see any particular objection to them, and the amount, I think, is not great. If any locality feels that its commercial needs should be investigated I do not think they should be prevented from having an investigation.

Mr. TREADWAY. You assumed that those in the list carried in the bill were the most important ones for consideration?

Col. NEWCOMER. We eliminated one item from the list. That was the item relating to Minnesota and North and South Dakota, wherein an appropriation was made for investigating a flood proposition. At the present time there is a flood-control act which prescribes the method of procedure for the investigation of floods, and it seemed to us that it ought to be handled by that method and not at the expense of river and harbor funds.

Mr. TREADWAY. In case work is temporarily suspended on river and harbor projects, in your opinion, what depreciation will take place in the plants that were in operation on such projects?

Col. NEWCOMER. I think that the principal disadvantage or trouble that would result from the failure of river and harbor appropriations would not relate so much to the condition of the Government's plant, but it would be reflected in the condition of the improvements

as transportation agencies. In other words, they would not be in a condition where it would be possible for them to serve the country's needs.

Mr. TREADWAY. In your opinion, there would not be much actual depreciation of the Government's property if the work was suspended?

Col. NEWCOMER. No, sir; not of the Government's plant.

Mr. TREADWAY. Of course, on the other hand, there would be some works of improvement left in an unfinished state?

Col. NEWCOMER. Yes; there would be.

Mr. TREADWAY. But the loss on the actual property of the plant would be negligible?

Col. NEWCOMER. So far as the actual property is concerned, the loss would probably not be great, because we have certain funds on hand from which we can provide for the essential care of the property. Of course, you have great big expensive plants that are idle and not doing sufficient work to provide any return on the investment, which is a matter to be considered.

Mr. TREADWAY. Just one more question: What, in your opinion, would be the damage to the present established navigation of rivers by failing to continue the existing work?

Col. NEWCOMER. I think it would be quite considerable. The work we are doing is accommodating, in the aggregate, a very large tonnage, and that tonnage, of course, would all be exposed to the difficulties that would come from lack of maintenance of the channels.

Mr. TREADWAY. A maintenance appropriation would practically continue the present navigable condition, would it not?

Col. NEWCOMER. Yes, sir.

Mr. TREADWAY. You mean by that: Suppose there is a sand bar coming in the river, your idea of maintenance is, if you know that sand bar is sure to come, in so many months, your plant is there to clear it out?

Col. NEWCOMER. Yes, sir.

Mr. TREADWAY. I am not using engineering expressions, of course, but that is the thought you had in mind.

Col. NEWCOMER. Yes.

Mr. TREADWAY. And that is what maintenance means—it is to continue the existing conditions in the channels; am I right about that?

Col. NEWCOMER. Exactly.

Mr. TREADWAY. So that a maintenance item would practically keep navigation conditions as they now are, in your opinion?

Col. NEWCOMER. Certainly; it would do that. Of course, there is also the question, if you decide to give only a sufficient amount to cover maintenance and make no provision for continuing improvement work, that there are many cases where we have large plants involved which would be thrown out of occupation, and not only Government plants but contractors' plants; and you would have no progress made in carrying to completion an improvement like that of the Ohio, for instance, which involves a total expenditure of seventy-five millions. You have already spent in there, or authorized the expenditure of, I think, in the neighborhood of forty millions. And if you let that work lie of course the work that has been done will be useful, but the more you do the more useful it becomes;

because every additional lock and dam that is built brings into use just so much more territory which it will serve.

Mr. TREADWAY. Has the scarcity and high price of labor been given any consideration? Are you likely to be embarrassed by a lack of people to work at the various plants?

Col. NEWCOMER. We are likely to be embarrassed by the difficulty in getting labor and materials. These estimates are the estimates that we made last year, and they have not been increased on account of that consideration; but we will undoubtedly be embarrassed in carrying out some of these projects because of those conditions. However, we will be able to do considerable work of maintenance with this money we expected to use, as far as that is concerned, and we probably will be able to take care of the most urgent features of the work.

Mr. COSTELLO. Many of the large projects of the Government for the improvement of commerce, or for the benefit of commerce, or improvement of the harbors, are in the nature of continuing contracts. A man bids to complete a certain character of improvement which might involve work covering a period of five or six years. In the event of our not appropriating the money to continue that work the contractor, or even the Government itself, might lose the interest on the investment in the plant; and in the case of a private contractor there is a question whether the Government would not be liable for such deterioration and loss as the contractor would be put to due to the suspension of work of that character.

Mr. HULBERT. There are a lot of continuing contracts, but they are all carried in the sundry civil bill and do not come in here at all.

Mr. COSTELLO. I just wanted to know, and I am asking the colonel.

Col. NEWCOMER. The contract liabilities of the Government are taken care of in the sundry civil bill. Of course there are a great many contractors engaged on work, as on the Ohio River, for instance, where we do not have a continuing contract in force, who expect to continue on that work because the Government has practically obligated itself to a certain program of procedure there, and they are expecting to use their plants in that work under new contracts, as the Government provides the appropriations. They would have no contract claim, of course.

Mr. COSTELLO. In your judgment, as an engineer connected with the War Department, with many years experience in this particular character of work, it would be a mistake for Congress not to pass a rivers and harbors bill this year?

Col. NEWCOMER. I certainly do think it would be a mistake for Congress not to pass a river and harbor bill this year. And, moreover, I think it would be very desirable to provide for a number of additional new projects, as far as that is concerned. I do not see why the transportation service of the country should be allowed to run down at this time when we need the maximum efficiency of every Government agency. In other words, we have taken a backward step on account of the present emergency, by withdrawing some of these improvements which ought to be included. But we are trying to meet the desire of Congress, as we understood from the recent action here regarding this matter, that you would not take up a general bill, but would only take up the more urgent matters. This bill was framed

to meet that understanding; but we think there are other items which are excluded that are desirable projects.

Mr. FREAR. About what is the amount of reduction in the bill as proposed and the bill as it passed the House at the last session, after deducting the Mississippi River item?

Col. NEWCOMER. As I recall, it would be, I think, somewhere between six and eight millions.

Mr. FREAR. That is after deducting six millions for the Mississippi River item?

Col. NEWCOMER. Yes, sir; after deducting the six millions for the Mississippi River.

Mr. GALLAGHER. You are speaking of the bill as it passed the Senate now?

Col. NEWCOMER. Yes, sir; the Senate bill.

Mr. FREAR. But the Senate has added quite a number of items to the bill as it passed the House at the last session.

Col. NEWCOMER. Yes; the Senate has added quite a number of items; but it did not materially change the total, because it took out the appropriation for the purchase of the Delaware & Chesapeake Canal and put in a small sum for its condemnation. But it did put in some additional new projects, and we simply took their bill as a basis of consideration for what we have here.

Mr. DUPRÉ. Before we get to the consideration of particular items, I would like to make inquiry as to an item not in the bill. Is this bill drawn on the theory that the sundry civil bill or some other bill emanating from the Appropriations Committee is going to take care of the lower Mississippi River improvements?

Col. NEWCOMER. Yes, sir. The sundry civil bill had an item in it, as it went to conference, providing for the Mississippi River.

Mr. DUPRÉ. Have you any assurance that the House conferees are going to abide by the Senate amendment?

Col. NEWCOMER. I do not know. I do not understand that the conferees have met. But that bill is the place for that, just as Mr. Hulbert stated a moment ago, as the work is practically on a continuing contract basis. And a Senate amendment providing for it on that basis has been added to the sundry civil bill, and that is the place for it.

Mr. KETTNER. Are there any items not in the Senate bill now being provided for in the sundry civil bill, the Army, or the Navy bills?

Col. NEWCOMER. There are only two items I know of—the Sacramento River and the lower Mississippi. These are being provided for in the sundry civil bill and are taken out of—

Mr. KETTNER. I know there were some projects provided for or suggested to the Naval Committee. Were they taken from this bill?

Col. NEWCOMER. Oh, no; they were not taken from this bill; they would remain in this bill. They are being made large enough, as recommended by the Navy Department, to facilitate the operation of our fleet of defense. Those facts have been reported to Congress; but as to where they should be put, I do not know.

Mr. GALLAGHER. What improvements for military operations are going to be taken care of in the naval bill?

Col. NEWCOMER. The East River is in this bill and the improvement of Norfolk Harbor.

Mr. GALLAGHER. Why, in the East River they have plenty of depth there—

Col. NEWCOMER. The depth provided for the East River is the same as the depth through Hell Gate. That is 35 feet. And the bill that was passed by the House and reported to the Senate had an item for the East River.

Mr. HULBERT. Did not the recommendation made by the Secretary of War and the Secretary of the Navy under that project, as contained in the last naval appropriation bill, provide for a 40-foot channel for naval purposes through Hell Gate?

Col. NEWCOMER. Ultimately.

Mr. HULBERT. Is there any reason why the channel for naval purposes through Hell Gate should be of any less depth than the channel over Diamond Reef?

Col. NEWCOMER. Of course, that is a question which the naval authorities have to decide upon, and they have recommended that there be provided immediately a 35-foot channel through Hell Gate, and ultimately a channel of 40 feet.

Mr. HULBERT. Will not the same vessels that use that channel going in and out of the navy yard have to use this channel, and, therefore, if it is necessary to make a 40-foot channel through Diamond Reef isn't it equally necessary to make a 40-foot channel through Hell Gate?

Col. NEWCOMER. I do not think it is equally necessary, because I think if it were the naval authorities would say so.

Mr. HULBERT. I understood they had said so.

The CHAIRMAN. Now, gentlemen, we will proceed with the various items.

Colonel, take up the first item, on page 2, among the recommendations of the Secretary of War, "Gloucester, Beverly," etc.—a group of items in Massachusetts—where a recommendation of \$24,000 for maintenance is made. Will you please explain to the committee that grouping and how you arrived at the aggregate estimated for there?

Col. NEWCOMER. These are practically all of the harbors on Massachusetts Bay—that is, from Newburyport, on the Merrimac River, to Cape Cod, except Boston Harbor. We thought Boston Harbor ought to be handled as a separate item, and all the others were included in this one item, and the amount there is the same amount as estimated for before.

Mr. BOOHER. The gross amount here is the same as the amount estimated for all those items in the other bill?

Col. NEWCOMER. Yes, sir; it is the same amount as estimated for in the annual report for all those works.

Mr. FREAR. For this group \$24,000 was estimated for the maintenance of the Mystic and Malden Rivers, and then there was a further sum of \$10,000 included in the total, which this item does not include?

Col. NEWCOMER. Exactly.

Mr. HULBERT. As I recollect, last February, when you appeared before the committee, you stated that \$24,000 was the least amount you could get along with for the improvement of the Mystic and Malden Rivers; so that you do not now contemplate spending any

part of that \$24,000 item in that first group for the improvement of those rivers?

Col. NEWCOMER. We do not expect to spend it on any of the other items; no, sir.

The CHAIRMAN. Are there any other questions regarding the first item? If not, we will take up the second:

Stonington and New London Harbors, Conn.; Pawtucket River, R. I., and Conn.; and Mystic and Thames Rivers, Conn.—for maintenance, \$10,000; for completing improvement of New London Harbor, \$160,000; in all, \$170,000.

Mr. FREAR. Let me ask Col. Newcomer there. Is that for commercial needs or for the public defense; or is there any particular urgency for that improvement?

Col. NEWCOMER. The urgency there is commercial. That is an important harbor, where the State is going to large expense to build terminals and where the Government has obligated itself to give them this additional depth of water. And we think that ought to be continued.

Mr. FREAR. This is a new project, although it was included in the last bill?

Col. NEWCOMER. It is not a new project; it is an adopted project, and this is for the completion of it.

Mr. FREAR. That is right; I stand corrected.

Col. NEWCOMER. Yes.

The CHAIRMAN. The next is:

Duck Harbor, Branford, New Haven, Milford, Bridgeport, Southport, Norwalk, Five Mile River, Stamford, and Greenwich Harbors, Westport Harbor, and Saugatuck River, breakwaters at New Haven, and Housatonic River, Conn.—for maintenance, \$71,000.

Are there any questions on that item?

Mr. FREAR. In that case, have any specific amounts been set apart for these various projects making up the total of \$71,000 for the group?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Could you suggest what the items are, in order that we may have some intelligent understanding of them? For instance, it begins with Duck Island.

Col. NEWCOMER. I would have to look into the bill. These are all harbors that are grouped along the Connecticut coast, and the largest item there—

Mr. FREAR. New Haven Harbor is the first item, \$14,000.

Col. NEWCOMER. \$14,000 for that.

Mr. FREAR. Bridgeport?

Col. NEWCOMER. Bridgeport Harbor is \$24,000; Norwalk Harbor, \$8,000. We cut out there the additional improvement of Norwalk Harbor, and there is \$17,000 for the group that was there before—Five Mile River, Stamford, and Greenwich Harbors, Westport, and Saugatuck River—and we have incorporated that group in this larger group.

Mr. FREAR. And also the Housatonic River?

Col. NEWCOMER. The Housatonic River is \$8,000. I may say that for any one of these cases you will find the amounts for maintenance given, item by item, in the Senate bill. We have simply grouped them together here.

Mr. FREAR. These are not connected with the national defense?

Col. NEWCOMER. These are items that are commercial—for maintenance.

The CHAIRMAN. The next item is Connecticut River above and below Hartford, Conn.—continuing improvement and for maintenance below Hartford, \$70,100.

Mr. FREAR. Referring to that item, there has been added to the phraseology Connecticut River “above,” compared with our former bill?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And I remember that is in relation to another project.

Col. NEWCOMER. There is a project above Hartford and one below.

Mr. FREAR. This is permitting the expenditure of part of this item on the project above?

Col. NEWCOMER. Yes. There is nothing asked for above Hartford, and this is now to take care of “below” Hartford.

Mr. FREAR. Is there any commerce above Hartford?

Col. NEWCOMER. Very little, and there is very little work up there.

The CHAIRMAN. The next item is, Burlington Harbor, Vt.; Plattsburg and Port Henry Harbors, N. Y.; and Narrows of Lake Champlain, N. Y. and Vt., for maintenance, \$5,000; for improvement of Narrows of Lake Champlain in accordance with the report submitted in House Document No. 1387, Sixty-second Congress, third session, and subject to the conditions set forth in said document, \$300,000; for completing improvement of Port Henry Harbor in accordance with the report submitted in House Document No. 369, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$71,500; in all, \$376,500.

Mr. HULBERT. I take it that Port Henry improvement is to afford a means of taking ore out of the iron mines?

Col. NEWCOMER. It is an iron-ore proposition.

Mr. HULBERT. There is an annual shipment there of about a million tons.

Col. NEWCOMER. It is about a million tons. The purpose of this improvement is to make available a sufficient channel through the narrows at the end of the barge canal which the State has built and which is finished.

Mr. HULBERT. Yes; that is in operation.

Col. NEWCOMER. That is in operation, and we have here in the narrows a very obstructive bend where we can not take a big boat around it.

Mr. TREADWAY. Is that in north Lake Champlain, or south?

Col. NEWCOMER. South.

The CHAIRMAN. The next item is Olcott, Charlotte, Pultneyville, Great Sodus Bay, Little Sodus Bay, Oswego, Cape Vincent, and Ogdensburg Harbors, New York; for maintenance, \$33,500.

Mr. DEMPSEY. Olcott is in my own district. The piers there are out of repair. The tops of the piers are substantially gone, and in order to preserve them it is necessary, is it not, to have some work done there at once?

Col. NEWCOMER. There was no estimate for Olcott Harbor, as I recall, for the coming year. I will look that up in a moment. In that case the traffic apparently has practically ceased.

Mr. DEMPSEY. That is true there is very little traffic there; but in the summer it is used for pleasure purposes and there was until recently traffic with Toronto. And I understand they propose to put on a line of boats again this summer. Now, just to maintain that harbor, just to keep the piers so they won't absolutely be ruined, it is necessary to have some work done there at once.

Col. NEWCOMER. The company which was running that boat agreed to maintain the pier and channel as a consideration for the Government doing certain work there; so that we understood the situation was adequately taken care of in that way. The report states no operations are proposed during the next fiscal year unless there should be a revival of traffic, which would require redredging of the channel. Should such redredging become necessary, funds available are sufficient for the purpose; hence no estimate of funds is submitted.

Mr. DEMPSEY. What page is that?

Col. NEWCOMER. Fifteen hundred and twelve of the Annual Report of the Chief of Engineers.

Mr. DEMPSEY. If there is any necessity why could it not be cared for by this time?

Col. NEWCOMER. Of course, funds are available and that is one of the items. If it is included in this group and work is needed there and funds could be spared, of course it could be paid for from this appropriation; there is no question about that.

Mr. DEMPSEY. You say there are funds available; what funds are available?

Col. NEWCOMER. There is a balance remaining unexpended of \$1,800.

Mr. DEMPSEY. That could be used for this work, aside from this appropriation?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Might I suggest, Mr. Dempsey, this would illustrate one of the advantages of the group system; because if there is anything left over from maintenance projects for which appropriations have been estimated, then, in the discretion of the Chief of Engineers, it would be utilized for this improvement if you can show that it is necessary.

Mr. DEMPSEY. To whom should I come to see about the use of that \$1,800 for that immediate necessity?

Col. NEWCOMER. Of course, the district officer is the one who handles that, and he is Maj. Frazier at Buffalo. Of course, it is my desk in the Chief of Engineers' office that handles the problem here, but we always refer it to the district engineer for report.

Mr. HULBERT. Substantially all of this \$33,500 provided for in this item will be for the improvement of the Great and Little Sodus Bays, according to the last bill?

Col. NEWCOMER. That is right; yes, sir. There was \$21,500 for the Great Sodus Bay and \$12,000 for the Little Sodus Bay, before.

The CHAIRMAN. The next item is Port Chester, Mamaroneck, and Echo Bay Harbors, East Chester and Westchester Creeks, and Bronx River, N. Y.: Completing improvement of East Chester Creek, \$11,000.

Mr. HULBERT. I would like to ask a question there. When we made up the last bill you stated \$26,000 was required for the improvement of Port Chester Harbor?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. And \$11,000 for East Chester Creek—making a total of \$37,000. Do you feel now, Colonel, that you can eliminate the \$26,000 item and take care of Port Chester out of the amount which was provided in the last bill for East Chester Creek alone?

Col. NEWCOMER. We do not expect to provide for any further improvement of Port Chester at this time. This amount here, you see, all goes to East Chester Creek, as provided in this item. And there was no estimate for maintenance for any one of these works before. There was an item for continuing the improvement of Port Chester which we thought might be eliminated.

Mr. HULBERT. Did you eliminate it because it is a continuing improvement?

Col. NEWCOMER. Because we do not think it is as urgent as the other item.

Mr. HULBERT. Is that the policy which has been pursued in making up all of the items—to eliminate items for continuing improvements?

Col. NEWCOMER. Only some of the items have been eliminated. We have taken out some of the items in order to prune the bill down to the items which are the most urgent. We have taken out certain items of continuing improvements, as well as certain items of new projects.

Mr. HULBERT. Do you regard the improvement of East Chester Creek as of greater importance than continuing the improvement of Port Chester Harbor?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is:

Saugerties, Rondout, Peekskill, and Tarrytown Harbors, and Wappinger Creek, N. Y.: For maintenance, \$3,500.

Are there any questions on that item?

The next item is:

New York Harbor, N. Y.: For maintenance, including Ambrose Channel, \$40,000; for improvement of channel between Staten Island and Hoffman and Swinburne Islands, in accordance with the report submitted in House Document No. 25. Sixty-fourth Congress, First session, \$50,000; in all, \$90,000.

Mr. HULBERT. Colonel, do you regard the improvement of the channel between Staten Island and Hoffman and Swinburne Islands as more important at this time than the improvement of the Upper Bay Anchorage Grounds?

Col. NEWCOMER. This is considered more urgent; yes, sir; because the channel below does not provide a sufficient depth for that boat they are going to put in the quarantine service there.

Mr. HULBERT. You regard the same channel as of more importance for improvement than Bay Ridge and Red Hook Channels?

Col. NEWCOMER. Yes, sir; for the amount involved.

Mr. HULBERT. Have you considered the urgency of the Bay Ridge and Red Hook Channels in connection with the enormously increased shipments of food supplies and other necessities to be sent over to the allies?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. And do you think the conditions of the Bay Ridge and Red Hook Channels, at the present time, are sufficient to meet the

present needs of the merchants and their needs in the immediate future?

Col. NEWCOMER. Well, we think in that case, as in many other cases where items have been omitted, that although the work proposed before was very desirable work, we do not consider it as of the same degree of urgency as are the others. We do not consider, for instance, that the work is of the same class as the work to give access to the new pier which is now not accessible at all, up in the Hudson River. They already have pretty good channels at Bay Ridge and Red Hook.

Mr. HULBERT. Why have you eliminated the item of \$250,000 for continuing the improvement of the Harlem River?

Col. NEWCOMER. That was done by Gen. Black personally. I had at first included it, myself, because I was not as familiar as he was with the local situation. He said he thought that amount could be spared, in view of the amount now on hand, as not being as urgent as some of the other items.

Mr. HULBERT. You are familiar with the fact that we now have in the Harlem River a stretch with only a depth of 12 feet, at Macombs Dam Bridge?

Col. NEWCOMER. I do not know of any place in the Harlem River where there is only a depth of 12 feet for any distance. Of course, there are some places which may show only that depth; but I do not think it is limited to that.

Mr. HULBERT. Yes, there is a stretch there with only a depth of 12 feet, right near the bridge.

Col. NEWCOMER. You mean it has been there for some time?

Mr. HULBERT. Yes.

Col. NEWCOMER. And that has never been taken up as an improvement?

Mr. HULBERT. Of course this river has a commerce of a billion and a half dollars per annum, and I was wondering whether they were going to suspend operations on a stream of that importance where the work under way is to bring the minimum depth up to the average depth of the river?

Col. NEWCOMER. You will find there are considerable funds on hand for the Harlem River. We had an appropriation of \$250,000 made last year; so that there was available for this year \$274,000, and there was the sum of \$231,000 available the 1st of March, I mean, unexpended. Of course contracts for much of that amount have been approved. The amount appropriated last year has not all been placed under contract. But taking into view that situation and following the general principles in framing this bill, the Chief of Engineers concluded that that item could well be omitted at this time, or rather, could properly be omitted.

Mr. HULBERT. I want to call your attention to page 222 of the report for 1916:

Condition at the end of fiscal year: About 61 per cent of the work proposed under the existing project (which, by the way, was adopted in 1879) has been completed. The work done under all projects has resulted in making a channel 15 feet deep at mean low water and 400 feet wide from the East River to Putnam Railroad bridge, except at a few points, where the channel is somewhat narrowed by shoals, and at Macombs Dam Bridge, where the available depth is 12 feet in the westerly draw opening; the easterly one is not navigable, being obstructed by ledge rock (now in process of removal).

Now, is the amount on hand sufficient to continue the removal of the rock ledge in that channel?

Col. NEWCOMER. It so states on page 223, under "continuing operations":

Work at Macomb Dam Bridge is now under way and should be completed in the spring of 1917.

In other words, I understand that they will get a channel through there; they will not get all of the rock out.

Mr. HULBERT. The folks up there now are complaining of the obstruction, that it is making it difficult for the present commerce, and that when the barge canal is put in operation this spring there will be a tremendous increase in commerce.

Col. NEWCOMER. Of course, the rock will be removed to a certain extent. The barge canal is a very different proposition, as you have here a tide of between 4 and 5 feet, and, so far as the barge-canal boats are concerned, you have a sufficient depth now.

Mr. HULBERT. But there are also certain hours of the day when they are prevented from opening those bridges.

Col. NEWCOMER. That is true.

Mr. HULBERT. And that very largely controls the advantages we get from the tide. In other words, it makes it necessary to have a uniform channel there of 15 feet during all the 24 hours.

The CHAIRMAN. Are there any further questions, Mr. Hulbert?

Mr. HULBERT. No; that is all.

The CHAIRMAN. The next item is:

Hudson River Channel, New York Harbor, N. Y.: Continuing improvement, \$210,500; for improvement in accordance with the report submitted in House Document No. 1697, Sixty-fourth Congress, second session, \$600,000; in all, \$810,500.

Mr. HULBERT. I assume that is to take care of the condition at the Forty-fifth Street piers and also the widening of the river down by Canal Street?

Col. NEWCOMER. That is right.

The CHAIRMAN. The next item is Black Rock Channel and Tonawanda Harbor, N. Y. The unexpended balances of appropriations heretofore made and authorized for this improvement are hereby made available for Lake Erie entrance to Black Rock Channel and Erie Basin and for widening the channel at the bend.

Mr. DEMPSEY. I have quite a little on that, Mr. Chairman.

Now, Colonel, you know as a fact that the steel mill down there below North Tonawanda has been closed for two or three years. It had a million-and-a-half to a two-million-dollar business, employed a very large number of hands, had a weekly pay roll of, I think, over \$5,000, but in competition with, for instance, the Lackawanna and that new mill farther up, on account of their being able to handle ore with boats that drew more water, the mere difference in the handling of ore with larger boats put that concern out of business, and, as I understand it, the benefits from the use of that new ship canal are lost. Now, as I understand this item, the department has been waiting for the town of Tonawanda to lower the intake pipes. They have had an election up there, and they have voted to lower the intake pipes and issue bonds, and that project will be taken care of in

the next few weeks. I do not know whether they are at work at it now, but at any rate they are ready to let the contract. There is only \$6,000 of this money on hand, and the project is going to cost between two hundred and fifty and three hundred thousand dollars—I think \$250,000. Now what are we going to do about that; what condition are we in?

Col. NEWCOMER. This does not affect that at all.

Mr. DEMPSEY. It does affect it in one way, doesn't it? It takes away from the improvement of the channel lower down and puts it up toward the upper end, where we do not need it as badly.

Col. NEWCOMER. Oh, no, sir; it does not take away, it simply permits us to spend as much of this money as we feel we can afford to take away for the entrance. That entrance is not properly taken care of under the present situation. We expect to take care of the situation below with funds on hand, and we have a contract authorization which will permit us to make contracts. Of course, the money will have to be supplied later in the sundry civil bill. This does not effect that situation at all. We won't allow this authorization to prejudice the other work; the other work is an important work, and we expect to go ahead with it as fast as we can, as soon as conditions permit, which is the lowering of that pipe.

Mr. DEMPSEY. Suppose the two cities are ready to let the contract for the lowering of those intake pipes and they have the idea that that could be combined with the contract for the improvement in the lower river with advantage to them and to the Government; in other words, that the work of lowering the intake pipes would really be a part of the work of deepening the channel, and that any contractor would take the combined work at a more reasonable figure than he would the work separately? Is there any reason why that could not be done, why the contracts could not be advertised and let simultaneously? Of course, there would be separate contracts with the municipalities, but could not the United States Government advertise and let its contract at the same time?

Col. NEWCOMER. That appeals to me now as a practical proposition. There is a provision of law which permits the Government to accept funds from a locality to be used in connection with expenditures to be made by the Government in any given locality, and I think this might be combined in that way. Of course, here we are faced by the situation that there is a condition which must be fulfilled by the locality in order to permit the Government work to proceed, and I think we might have to submit that to our legal advisors as to whether the incorporation of the work in the same contract with the Government would meet the legal situation. If they could do that I think the other features could be arranged.

Mr. DEMPSEY. You understand there is a new iron and steel plant that has located there just in the last few months; it has just come there?

Col. NEWCOMER. No; I was not aware of that. But this would not affect that. This is another illustration of the benefits from grouping. In other words, here is this entrance for which we now have no separate appropriation, no separate way of taking care of it, and yet it would be included in this, because it is really a part of this channel.

Mr. DEMPSEY. There is not any doubt about the fact you have a contract authorization, so that the work can go on as soon as the two municipalities have complied with the condition precedent?

Col. NEWCOMER. The only difficulty would be if the work proceeded rapidly the contractor might have to wait for his money. That, of course, is a disadvantage.

The CHAIRMAN. The next item:

East River, N. Y.: Continuing improvement in accordance with the report submitted in House Document No. 188, Sixty-third Congress, first session, \$1,250,000: *Provided*, That a depth of 40 feet is authorized across Diamond Reef: *Provided further*, That the unexpended balance of appropriations heretofore made and authorized for a depth of 35 feet across Diamond Reef are hereby made available for a depth of 40 feet: *And provided further*, That so much as may be necessary of this and any other appropriations made herein or hereafter for specific portions of New York Harbor and its immediate tributaries may be allotted by the Secretary of War for the maintenance of these waterways by the collection and removal of drift.

Mr. HULBERT. I would like to propound this inquiry: Col. Newcomer, when the bill which passed the House last February was before the Senate Committee on Commerce Gen. Black appeared there and was heard on this item and, as I am informed by members of that committee, as a result of his testimony this provision was incorporated when the bill was reported out by that committee:

Provided futher, That the Secretary of War may enter into a contract or contracts for such materials and work as may be necessary to prosecute the said project, to be paid for as appropriations may from time to time be made by law, not to exceed in the aggregate \$6,500,000, exclusive of the amounts herein and heretofore appropriated.

Can you tell me why that provision was abandoned and that lump-sum appropriation of \$1,250,000 substituted?

Col. NEWCOMER. Subsequent consideration of that matter led to the conclusion that the best thing to do immediately was to undertake the work that could be completed most rapidly and afford a practicable channel. The channel now contemplated, for instance, over Diamond Reef is only half the full width. The present authority is for a channel 35 feet deep, but when we get through that channel will be from 35 to 40 feet deep.

Mr. HULBERT. Of the same width?

Col. NEWCOMER. Of the full width at the ends, but there is a central portion of that channel where we can get between 35 and 40 feet for a width of 400 feet. At the ends it will be 40 feet deep for the full width of 1,000 feet. We are not certain about the rock in the central part of the channel, because that is 35 feet deep and has not been explored so fully. The explorations heretofore have been to get a 35-foot channel. But we can get there a channel of between 400 and 500 feet wide, without any rock removal, and of a depth varying from 35 to 40 feet; and the idea was to make a contract for that part not involving rock removal with the delay that it would involve, and by so doing get a very much improved facility over what they have now. That would require, in addition to what we already have for the item, the sum of \$250,000. In other words, if you make available the money already appropriated and authorized, and we can get \$250,000 additional, we can get this channel from 400 to 1,000 feet wide and increasing the depth materially over what they have at the present time, without rock removal. Then, at Hell

Gate, instead of providing for the entire widening at that place, which it was contemplated before would cost, as I recall, about \$3,600,000, or in that neighborhood, the expenditure of \$1,000,000 will get you a channel which the district officer reports would be, I think, 500 feet wide. This amount anticipates the removal of pot rock, channel through reef between Halletts Point and Frying Pan 500 feet wide, and small amount from western end of middle reef. That, of course, is a very contracted place—Hell Gate—and the former estimate had been for a more commodious channel than this. But with this million dollars they could provide for getting a 35-foot depth there, which is a practicable channel; and we thought that a better proposition than to take up now probably a larger work which would extend over a number of years.

Mr. HULBERT. This improvement of Hell Gate is connected with the national defense more than the commercial requirements.

Col. NEWCOMER. It is part also of the commercial proposition. It has been recommended as a commercial proposition.

Mr. HULBERT. But is being limited now to meet the needs of the national defense?

Col. NEWCOMER. This will provide for the work we can do in the shortest length of time, in order to get a practical channel through there. That is the idea.

Mr. HULBERT. There is a bend in the river at Hell Gate?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Isn't it a fact that the battle cruisers now under construction have a length of over 800 feet?

Col. NEWCOMER. Something like that.

Mr. HULBERT. And if you only have a channel 35 feet deep and 400 feet wide, will it be possible for those vessels to make the turn at that bend?

Col. NEWCOMER. Of course they can make the turn, but they will have to wait for a suitable tide.

Mr. HULBERT. In other words, after you have made the improvement you now contemplate, in order to accommodate the largest vessels that would have to take advantage of that channel, there must be the most favorable conditions of the tide?

Col. NEWCOMER. Yes. I think they would anyhow.

Mr. HULBERT. At the low stages of the tide would the channel be sufficient?

Col. NEWCOMER. Oh, yes; the depth of channel would be sufficient.

Mr. HULBERT. Haven't these colliers that come in and out of the Brooklyn Navy Yard a draft of 33 feet?

Col. NEWCOMER. I do not know that any of them have as much as 33 feet draft.

Mr. HULBERT. I know some that have.

Col. NEWCOMER. There possibly may be some that have.

Mr. HULBERT. I know some that have. Assuming those colliers have a draft of 33 feet, could they be accommodated in this 500-foot channel through Hell Gate except at the very height of the tide?

Col. NEWCOMER. Oh, yes; they could be accommodated on the slack of the tide, either high or low. The great trouble at that place is the swiftness of the current, and in order to take a large boat through safely most of the boats would probably go through only on the slack of the tide.

Mr. HULBERT. Of course my information, which I have gotten from pilots, is that the boats could not get through there.

Col. NEWCOMER. Do you mean your pilots have given you information as to what they could do if they had a 35-foot channel there or what they do now?

Mr. HULBERT. They tell me a 500-foot channel would not be sufficient for the naval vessels.

Col. NEWCOMER. We have boats moving in channels of that size. We, of course, do not maintain, Mr. Hulbert, that a 500-foot channel is an adequate channel there. It is simply the channel that can be provided the quickest and get a passage. You can not get through there at all now.

Mr. HULBERT. As a matter of economy, wouldn't it be better to undertake to provide the necessary channel in order to get adequate accommodations than not to undertake any at all?

Col. NEWCOMER. It did not appeal to us that way. We feel there is an emergency that has to be met by an emergency measure.

Mr. HULBERT. In other words, this is simply now an emergency proposition?

Col. NEWCOMER. As far as this particular proposition here is concerned it is an emergency measure to get the best we can in the quickest time.

Mr. HULBERT. It does not in any sense of the word comply with the recommendations by the Secretaries of War and Navy in the last appropriation bill for a military channel through Hell Gate.

Col. NEWCOMER. This is the first step for that program in that locality.

Mr. DUPRÉ. This item in the bill as it passed the House provided for \$500,000. I notice it is now increased to \$1,250,000. Will you kindly explain briefly why that increase is made?

Col. NEWCOMER. That was, for one reason—I have just explained that to Mr. Hulbert—because subsequent consideration led to the conclusion that it would be better not to make a long-time contract covering all of the work involved, but to make contracts involving only work that could be done most expeditiously so as to get a facility through there and afford a passage for the boats. And this does that. Of course one thing was to cut out the continuing contract feature of it. As a matter of fact, a part of this sum possibly could be made a continuing contract authorization if you preferred to do it, because we could not probably spend the whole million dollars in that one year. We could spend a good part of it, but not all. And the idea was to provide with cash for the work that could be done most promptly to provide the needed facility for getting through.

Mr. DUPRÉ. Isn't there an enlargement of the project?

Col. NEWCOMER. Yes. The 40-foot channel at Diamond Reef is purely to meet that naval situation. We included it here because it was included before in the Senate bill.

The CHAIRMAN. I also understood you to say that the larger sum might enable you to effect economies in the making of contracts?

Col. NEWCOMER. Yes. This sum was made as small as we could and still get what we considered a satisfactory or advantageous contract.

Mr. HULBERT. As I understand it, after the adoption of this project, in order to increase the depth to 40 feet, it will necessitate the adopting of a new project?

Col. NEWCOMER. Forty feet through Hell Gate?

Mr. HULBERT. Yes.

Col. NEWCOMER. Oh, yes, sir.

Mr. HULBERT. What is the use of adopting one project now with the object of adopting a greater project later on for a greater width and greater depth?

Col. NEWCOMER. Of course that can be done when the Navy asks for it.

Mr. HULBERT. Haven't you deferred entering upon the work of Diamond Reef, which was authorized some time ago, waiting for an authorization to make this channel 40 feet deep and 1,000 feet wide, and wouldn't such an authorization now effect a very substantial economy and not necessitate the work being done twice?

Col. NEWCOMER. That is true, Mr. Hulbert.

Mr. HULBERT. And won't the same necessity for effecting that economy apply at Hell Gate as applies at Diamond Reef? In other words, won't it be doubling the expense to undertake cutting a channel now of 35 feet through Hell Gate and subsequently increasing it to a channel of 40 feet?

Col. NEWCOMER. Undoubtedly it will increase the expense—

Mr. HULBERT. Wouldn't it be cheaper, in other words, and more economical, to adopt a project for 40 feet for the main channel through Hell Gate, the same as we have at Diamond Reef?

Col. NEWCOMER. Under normal conditions it would be.

The CHAIRMAN. Keyport and Shoal Harbors, Woodbridge, Cheesequake, Matawan, and Compton Creeks, Elizabeth, Raritan, South, and Shrewsbury Rivers, and Raritan Bay, N. J.—for maintenance, \$58,000. Are there any questions regarding this item, Cold Spring and Absecon Inlets, Absecon and Tuckerton Creeks, and Toms River, N. J.: For maintenance, \$35,000?

Mr. FREAR. Of course, Colonel, that raises the very suggestion which I made a while ago of connecting some of the items in the last group. Cold Spring Inlet has had pretty large appropriations. It is what has been termed by some people on the floor as a real estate project, and is one where a Cape May company gave a million dollars. That was not in the bill before. But we had \$60,000. I think, in 1916—July 1, \$20,000, and July 27, \$40,000—\$60,000 for Cold Spring. The same thing is practically true of Toms River. It is a place provided to help the men down there with private yachts: that is, the engineer's report states that.

Now, how can these items be questioned over here or on the floor when they are grouped together in this way?

Col. NEWCOMER. Of course, you have the information about them in the annual report.

Mr. FREAR. But now the engineers will make whatever allotment they choose; \$60,000 was given last year to Cold Spring Harbor, and now any portion can be allotted under this, notwithstanding it may be the impression of some of us that it is not a worthy project.

Absecon was given the last time \$45,000, as I recollect, and now I see \$30,000.

Mr. HULBERT. Forty thousand. It was reduced to \$30,000 in the Senate.

Col. NEWCOMER. What we estimate is \$30,000 for Absecon Inlet and \$5,000 for Tuckerton Creek. Those are the only ones requiring additional funds for maintenance. We simply grouped those because those are improvements on the coast of New Jersey which would naturally go into one group.

Mr. HULBERT. This gets back to the proposition that if a majority of the members of this committee were opposed to any appropriation whatever for the maintenance of Cold Spring Inlet, but nothing was said about it in the committee because at the time the appropriation was considered it was expected the money would be used for Absecon Inlet and Toms River, and you found, as a matter of fact, you could get along with \$20,000 on those two projects and had \$15,000 left over, then the committee would not be able to exercise any supervision over that appropriation or allotment of that appropriation, or any part of it, to Cold Spring?

Col. NEWCOMER. I would say to simply cut out Cold Spring.

Mr. HULBERT. Strike it out here?

Col. NEWCOMER. Yes; strike it out.

Mr. COSTELLO. As a matter of fact, Absecon Inlet is a channel there from the ocean into Reeds Bay, which is kept open by a Government plant which costs practically this amount of money to maintain and operate for a fiscal year. We gave \$15,000 last year and practically \$15,000 was the appropriation before that. It is a way from the ocean in to Roods Bay back of Atlantic City, where the fishermen and yachtsmen who go in from the ocean use it as a rendezvous, and that is practically what it amounts to.

Col. NEWCOMER. We have a demand for it particularly at this time because it provides a place of safety for so many sailing and patrol boats, and in addition, with reference to this project, the Government adopted the program of opening that inlet and maintaining it for a period of five years, with the idea of determining, at the end of the five years, whether the improvement should be continued.

Mr. COSTELLO. I do not know whether you are acquainted with the matter I am going to speak of; but when the Atlantic Squadron held its practice test last year they did it in the neighborhood of Cold Spring Inlet. The inlet and back bay form a safe harbor, and they established their base there for the submarines and torpedo boats and torpedo destroyers, the larger battleships and cruisers lying out in the ocean. And I am credibly informed that the United States Government has contracted to spend a very large sum of money for the purpose of purchasing ground, if they have not already done so, for an aviation field here and also for a place where they are going to build vast storage plants for gasoline. So that with these features, Cold Spring Inlet is not such a project that, if there was any money provided for it in here, would require condemnation.

Mr. FREAR. The channel is about 200 feet wide and has an average depth of 18 feet, so that it could not accommodate the large vessels.

The CHAIRMAN. Just to correct Mr. Hulbert—he did not intend to say so, but he included Toms River as one of the projects for which an estimate had been given. There is no estimate for Toms River, but you had in mind Tuckerton Creek?

Mr. HULBERT. Toms River is included in the group.

The CHAIRMAN. Yes; but no estimate is made for it.

Mr. HULBERT. It had an appropriation in the last bill.

The CHAIRMAN. No; no estimate was made for Toms River. Of course, when we come to considered these items—

Mr. FREAR. I am not criticizing that, except to raise this question in regard to grouping. That is my purpose.

The CHAIRMAN. The next item: Cooper, Salem, Cohansey, and Maurice Rivers, Woodbury, Mantua, Raccoon, Oldmans, and Alloway Creeks, New Jersey: For maintenance, \$23,000; continuing improvement and for maintenance of Maurice River, \$25,000; in all, \$48,000.

Mr. FREAR. What is the particular purpose of that last item, Colonel?

Col. NEWCOMER. That is one of those streams of the Delaware River or tributary to the Delaware River where they have an agricultural community with very poor transportation facilities aside from the water, and it is very desirable to give them improved facilities. It is a case where the improvement has been under way, and they need some work in order to give them an effective outlet.

Mr. FREAR. Is it considered important?

Col. NEWCOMER. It is; yes, sir. Because most of those streams along there have been improved and it is only a question of maintenance. This one is really a project adopted a few years ago, and the work of providing a channel is still in progress.

Mr. FREAR. That is all to be expended for the Maurice River, that \$25,000?

Col. NEWCOMER. \$25,000 goes to the Maurice River.

The CHAIRMAN. Pittsburg Harbor, Pa.: For maintenance, \$5,000.

For Schuylkill River, Pa.: For improvement in accordance with the report submitted in House Document No. 1270, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$300,000.

Mr. FREAR. I wonder if Mr. Costello can tell us anything about that.

Mr. COSTELLO. We had this thrashed out pretty thoroughly at the last session.

The CHAIRMAN. Perhaps you would like to hear from Col. Newcomer on that?

Mr. FREAR. Yes; there was some question raised about it.

Mr. COSTELLO. We decided that it was the duty of the Government, as about one-third of the value of the shipping in Philadelphia was on this river. And this, I might say, was the first money I think the Government has ever expended on it. The additional depth is made necessary by the additional draft of the tankers that bring the oil from Texas and Mexico, and down around there.

Col. NEWCOMER. There are three main items in favor of this improvement. One is to give an increased depth to the navy yard and the others are the big grain elevators and then the oil. Those are the three elements that are really of special importance.

Mr. HULBERT. I do not think anybody who has ever seen it can doubt the necessity of the improvement.

Mr. FREAR. What is your view as to the desirability for the Government or the city of Philadelphia undertaking the improvement?

Col. NEWCOMER. I consider this would clearly come under the policy of the Government spending money on an improvement of that kind.

Mr. KENNEDY. What is the condition?

Col. NEWCOMER. The interest there is a very general one. The community has contributed very substantially and will contribute for this improvement by reason of the building of bulkheads—

Mr. KENNEDY. What is the condition attached?

Col. NEWCOMER. There are the bulkheads.

Mr. COSTELLO. The city government has spent about \$15,000,000 bulkheading in order to keep the waste land from washing into the river.

The CHAIRMAN. And by dredging up to the bulkheads?

Col. NEWCOMER. And by dredging up to the bulkheads.

The CHAIRMAN. Delaware River, Pa., N. J., and Del.: Continuing improvement and for maintenance from Allegheny Avenue, Philadelphia, to the sea, \$1,870,000; for maintenance of improvement from Allegheny Avenue, Philadelphia, to Lalor Street, Trenton, \$40,000 in all, \$1,910,000.

Mr. BOOHER. That is not as much as it was in the bill last year.

Col. NEWCOMER. It is the same as in the bill before, with the exception of the item of \$90,000, which has been cut out because other provision has been made for the work at Trenton.

The CHAIRMAN. The item above Lalor Street in the last bill has been omitted. Why was that cut out?

Col. NEWCOMER. Because we made other provision for that work.

Mr. FREAR. What provision?

Col. NEWCOMER. We made an allotment from the lump sum appropriation of 1915. We found this work was requiring more money than we anticipated. We found rock removal which was not expected. In fact, the department had reported the amount appropriated was sufficient, but in encountering this rock we could not do it, and then we put in an additional estimate for \$90,000 last year. But as that work ought to go ahead without waiting the action of Congress, on account of the terminal work the city of Trenton is engaging in there, and in order to give access for the boats that had made contracts for service there, it was concluded we ought to allot from the remaining balance of the lump-sum appropriation to take care of this work.

Mr. FREAR. From what appropriation was that allotment made?

Col. NEWCOMER. The \$25,000,000 appropriation of 1915.

Mr. FREAR. Is that still held by the Army Engineers to allot?

Col. NEWCOMER. There is a balance still remaining.

Mr. FREAR. And that is used for any emergency you consider requires it?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What is the immediate purpose of making this improvement up there? This is only a mile in length, as I remember, and very expensive—something like several dollars a square yard for excavation; that is, it is blasting rock.

Col. NEWCOMER. I do not know the cost in that unit, but it is quite expensive work. The city there, you know, has engaged in quite an extensive terminal development.

Mr. FREAR. That is, they bought the frontage and agreed to put up the wharves?

Col. NEWCOMER. And they have projected in there and are building wharves and slips, etc. And, as I understand, they have made contracts with navigation companies for boat service. And not only is the city doing that, but also the American Bridge Co., I think, or one of the subsidiaries of the Steel Corporation, has a plant there where they are building a great many steel barges, and they are given access to this same channel.

Mr. FREAR. What is the estimated cost to the Government for making the extension above that street?

Col. NEWCOMER. I really do not recall. I think it was estimated at something over \$140,000, or something like that: but it has been increased by at least 60 or 70 per cent.

Mr. FREAR. This does not cover all the deficit or all that will be necessary to complete it?

Col. NEWCOMER. This item of \$90,000 was the amount estimated to complete it, and we have now made provision for its completion by another arrangement, out of this other fund, so that we do not expect to ask for any more money for that work.

Mr. COSTELLO. Have you any idea what amount the corporation is spending there?

Col. NEWCOMER. I do not recall.

Mr. COSTELLO. I know there is quite a lot of activity.

Col. NEWCOMER. I do not recall. It is quite a large expenditure, however.

The CHAIRMAN. They have spent a large sum, and also the industrial plant there of the American Bridge Co., I think, recently completed or in process of construction?

Col. NEWCOMER. Yes.

The CHAIRMAN. The next item is Wilmington Harbor, Del.: For maintenance, \$50,000.

Mr. FREAR. That brings up the same point. As I remember, they have never made the contribution which they guaranteed for the Wilmington Harbor. This is on the Christiana River, and there was a condition precedent that they were to make a contribution up there. They have never made it, as I understand.

Col. NEWCOMER. I really do not recall. I think there was something of that kind, but that does not involve this work here. This is providing for maintenance.

Mr. FREAR. They were to put that in for maintenance.

Col. NEWCOMER. I would have to refresh my memory on that.

Mr. HULBERT. Page 393:

By an act of the Delaware State Legislature, passed March 9, 1901, the city of Wilmington was authorized to contribute toward the improvement of Wilmington Harbor to the amount of 10 per cent of the United States Government appropriation to an aggregate not exceeding \$60,000. To the close of the fiscal year the city of Wilmington has contributed \$30,817.11, including interest on the contribution.

Col. NEWCOMER. They have made some additional—I do not understand that was a condition imposed by Congress; it was a voluntarily assumed condition of local cooperation.

Mr. HULBERT. Of course, as we read this article here, the legislature of that State permitted them to do it, and there is not any

question, of course, but what they were compelled to provide the legislation or they would not have done it.

Mr. FREAR. They have not contributed the balance of \$30,000?

Col. NEWCOMER. Not yet. As I understand, they have contributed recently—within the last six months—some additional amount; I have forgotten what it is.

Mr. FREAR. How could they be compelled to make up their contribution?

Col. NEWCOMER. I do not think it is a condition that has ever been imposed by Congress, Mr. Frear. I think it is a condition, voluntarily assumed.

Mr. FREAR. It is a matter of record they made an offer, provided the Government would go on with the improvement. That is my recollection now. And they have given \$30,000, in round numbers, and I thought you made the statement, when the bill was last considered, that they have not contributed the balance.

Col. NEWCOMER. They have not contributed all the sum authorized by the State to be contributed. I do not know that there is any obligation resting upon them, so far as any legal requirement is concerned.

Mr. FREAR. Where would we find that?

Col. NEWCOMER. That is in the project document.

Mr. COSTELLO. This is for maintaining the work already completed by the Government?

Col. NEWCOMER. Yes, sir.

Mr. COSTELLO. As I understand the proposition, the city of Wilmington was to contribute a certain amount of work, if the Government would go on with this work. This \$50,000 is simply for the maintenance of that work which the Government has already completed?

Col. NEWCOMER. Yes, sir.

Mr. COSTELLO. That is the idea.

The CHAIRMAN. If there is no further discussion of Wilmington Harbor, we will take up the next item. Appoquinimink, Smyrna, Leipsic, Little, St. Jones, Murderkill, Mispillion, and Broadkill Rivers, Del.: For maintenance, \$30,000.

Mr. FREAR. Let me suggest, Mr. Chairman, the same objection exists to some of these that existed to some of the others. I do not care to make a question of it at this time.

The CHAIRMAN. Most, if not all, of these have been grouped heretofore.

Mr. HULBERT. I understand this amount will be applied to the Appoquinimink, Smyrna, Mispillion, and Broadkill Rivers?

Col. NEWCOMER. Practically; yes, sir.

The CHAIRMAN. I think those are about the only ones for which estimates were made.

Col. NEWCOMER. Ten thousand for the Broadkill.

The CHAIRMAN. The next item:

Government iron pier in Delaware Bay near Lewes, Delaware: For maintenance and repair in accordance with the report submitted in House Document Numbered Ten hundred and fifty-nine, Sixty-fourth Congress, first session, \$68,000.

Mr. HULBERT. Colonel, what is the immediate necessity of that improvement?

Col. NEWCOMER. This pier is important at this time on account of the fact that we have so many of these patrol boats, torpedo boats, and other small boats which have now no good landing at Lewes. This, of course, is the Delaware Breakwater, where they are apt to collect in considerable numbers.

Mr. FREAR. There is no commerce there, of course?

Col. NEWCOMER. There is no commerce there. The act of 1916 adopted the project for the reconstruction of this pier, or, rather its repair. It is not a reconstruction; it is taking off the planking and wooden beams and putting on a steel or concrete superstructure. Congress appropriated \$10,000 for that, and this is the balance required.

Mr. FREAR. Does this complete the work on the pier?

Col. NEWCOMER. Yes, sir.

Mr. KENNEDY. My recollection of it at that time is that it was not considered very important, but I understand from your statement that it is considered important at this particular time.

Col. NEWCOMER. It was of a rather questionable character, so far as river and harbor work was concerned, because it is used, you understand, by the Treasury Department—the Quarantine Service, the Lighthouse Service, and the Coast Guard. So that it is important for the Government service; but a question came up as to whether river and harbor funds ought to supply it or the Treasury Department funds ought to supply it.

Mr. KENNEDY. I think you are right about that.

Col. NEWCOMER. But in spite of that Congress adopted it as a river and harbor project, and, of course, the other is an urgency project for these other boats.

The CHAIRMAN. The next item:

Waterway between Rehoboth Bay and Delaware Bay. Delaware: Continuing improvement and maintenance. \$50,000.

Mr. FREAR. What is the importance of proceeding with that at this time, Colonel?

Col. NEWCOMER. That is a waterway which has been under construction for several years, along the coast down there below Lewes, and this appropriation is expected to give them an outlet. I do not think it will quite complete it, but it will at least cut through and give them an outlet for service. Considerable work has already been done.

Mr. FREAR. It is a project for commerce?

Col. NEWCOMER. There is no through waterway there, and this is to give them a through waterway.

Mr. COSTELLO. How much more money will it require?

Col. NEWCOMER. I do not recall; it is not very much.

Mr. COSTELLO. This is up the Chincoteague Bay, is it not?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Is this a canal?

Col. NEWCOMER. It is a canal; yes—that is, partly a canal and partly waterways deepened.

Mr. FREAR. How much is involved in that? You have not the amount stated there. How much is involved in this project?

Col. NEWCOMER. The commerce involved?

Mr. FREAR. No; the cost of the improvement.

The CHAIRMAN. You mean the balance necessary after appropriating this \$50,000?

Mr. FREAR. Yes.

The CHAIRMAN. It would be substantially \$65,000.

Mr. FREAR. Besides this?

The CHAIRMAN. Yes.

Mr. FREAR. That will finish it?

The CHAIRMAN. Yes.

Mr. FREAR. To what depth is that; 5 feet?

The CHAIRMAN. I think it is.

Mr. FREAR. Do you think, Colonel, that is of any benefit commercially—a 5-foot channel there?

Col. NEWCOMER. I think it is for local service where you are not involving the transportation of large tonnages, but where you are transporting farm produce and things like that, that a 5-foot waterway can render very efficient service. Of course, it is not a useful avenue of trade for large tonnages.

Mr. FREAR. It is local rather than national?

Col. NEWCOMER. Yes; in a way: but it affords an outlet. Every transportation system, of course, reaches out to localities and gets elements which are involved like this. It is not a part, you might say, of a trunk line, but is a feeder.

Mr. FREAR. A cost of \$56,000 is estimated, I understand?

Col. NEWCOMER. Yes, sir; with 5 feet as the project depth.

Mr. COSTELLO. The intent here was to furnish an outlet for that interior section of Delaware that lacks railroad facilities. There is a large farming section there that raises vast quantities of vegetables and things of that kind and where there are a great many fishermen. This means allowing them to get to the markets of Philadelphia and Camden, and through the Delaware River and Raritan Canal to New York; and it was practically for the purpose of relieving that great section there which did not have any means of transportation.

Col. NEWCOMER. That is right. There are some waterways along that coast that are cut off from the ocean; although there are inlets, they are not navigable, and there are a great many fishermen and others in there who have no outlet.

The CHAIRMAN. This matter has been before the committee a number of times, and my recollection coincides with that of Mr. Costello. In the first place, they are without rail transportation, and the only method of transportation is by water. There is an agricultural and fishing section in there, and this would afford them an outlet which they do not now possess.

Mr. FREAR. It is a rather expensive project, however.

The CHAIRMAN. "Waterway from Chincoteague Bay, Va., to Delaware Bay at or near Lewes, Del.: For maintenance, \$1,000."

The next item is improving inland waterway from Delaware River to Chesapeake Bay, Del. and Md., in accordance with the project recommended by the Chief of Engineers in paragraph 3 of his report dated August 9, 1913, as published in House Document No. 196, Sixty-third Congress, first session. The Secretary of War is hereby authorized to enter into negotiations for the purchase of the existing Chesapeake & Delaware Canal and all the property, rights of property, franchises, and appurtenances used or acquired for use in connection therewith or appertaining thereto: and he is further author-

ized, if in his judgment the price is reasonable and satisfactory, to make a contract for the purchase of the same, subject to future ratification and appropriation by Congress. In the event of the inability of the Secretary of War to make a satisfactory contract for the voluntary purchase of said canal and its appurtenances, he is hereby authorized and directed, through the Attorney General, to institute and to carry to completion proceedings for the condemnation of the said canal and its appurtenances. the acceptance of the award in said proceedings to be subject to the future ratification and appropriation by Congress. Such condemnation proceedings shall be instituted and conducted in, and jurisdiction of said proceedings is hereby given to, the District Court of the United States for the District of Delaware, substantially as provided in "An act to authorize condemnation of land for sites for public buildings, and for other purposes," approved August 1, 1888, and the sum of \$5,000 is hereby appropriated to pay the necessary costs thereof and expenses in connection therewith.

Mr. KENNEDY. What depth is contemplated in that Document 196. Sixty-third Congress?

Col. NEWCOMER. Twelve feet.

Mr. KENNEDY. Does the War Department feel that is important, from a military standpoint—a depth of 12 feet?

Col. NEWCOMER. It is not, of course, at all important for the movement of vessels of defense; that is, the naval vessels, for instance. The Navy Department regards nothing less than 16 feet as of any especial value for their purposes—the movement of submarines, naval boats, and things of that kind. The commercial importance of this canal between the Chesapeake Bay and Delaware River is more in this case.

Mr. KENNEDY.. Then, I understand, this involves more the commercial proposition?

Col. NEWCOMER. Yes. In other words, that may be important for the movement of troops, and things like that, from the transportation side; but it is the transportation side and not strictly the defense.

Mr. FREAR. In the last bill that went through the House we changed the policy entirely. That made an appropriation of \$1,300,000 for this project. It was opposed by some of us on the floor. When it reached the Senate they struck that out and put in something along the lines of what we have in this bill. Now, this authorizes the Secretary of War to enter into negotiations, and so on, and he is to estimate the value of the franchises and appurtenances to be used in connection therewith and make a contract if in his judgment it is thought best to do so; otherwise, condemnation proceedings are to be begun in the district of Delaware; that is, it is closest to this locality.

I want to ask, Colonel, if you know what was the reason for substituting this procedure?

Col. NEWCOMER. Because of the impossibility of ascertaining what that waterway could be bought for. In other words, there are certain private rights there that have to be quieted in order for the public to take charge of it, and there was no way, apparently, of arriving at any estimate that could be supported by evidence as to what we could get the waterway for. Different amounts have been recommended at different times as suitable amounts to be paid. The amount put in the House bill—I do not know on what it was based, I am sure; I

do not remember seeing any estimate of that particular amount. It possibly was the idea that an offer of that amount might be accepted; but this seemed to the War Department the best method of procedure; in other words, to actually get at the work—to get authority for negotiation or condemnation as the case might be—because it looks as though the condemnation would be required—would put the proposition in the most forward state.

Mr. FREAR. Did the War Department or the Board of Engineers draw this provision?

Col. NEWCOMER. No. I think this was prepared in the Committee of Commerce of the Senate. But, so far as the War Department is concerned, it is quite satisfactory to it as a means of attacking the problem.

Mr. FREAR. What could be the franchise value of a canal like that, where the stock is worthless and the bonds were only worth 50 cents on the dollar until this proposed purchase was introduced?

Col. NEWCOMER. They are paying interest on the bonds.

Mr. FREAR. They may be now.

Col. NEWCOMER. Yes; they are paying a certain interest on the bonds.

Mr. FREAR. But that is at the expense of allowing the property to depreciate.

Mr. DEMPSEY. That does not mean what you suggest at all, Mr. Frear, I do not think. This is an authorization to purchase all the property, rights of property, and franchise. "Franchise" means what they have; whether it is of value or not. It may not have value, and yet, if you are going to purchase a piece of property, you should be sure to get all there is.

Mr. FREAR. I was wondering what value could be fixed on a franchise if the stock is worthless.

Mr. DEMPSEY. I do not think it has that meaning at all.

Mr. COSTELLO. When the matter was up for consideration at the last Congress many of us held this procedure now in this bill was the proper method. Others thought there ought to be an appropriation, and we did appropriate \$1,300,000, which, in the minds of many people, would not purchase that property.

Mr. SWITZER. If I recollect correctly, this is what I was championing all the way through; that is, this sort of procedure rather than an appropriation of a million and a half or two million dollars.

The CHAIRMAN. Yes; I recollect that.

Mr. COSTELLO. I believed this was the proper method. I still believe it. The only way we will ever be able to determine the real value of that canal will be by condemnation. I do not think the Secretary of War will succeed in naming a price that will be accepted, and if we can proceed by calling witnesses to testify as to the value we will be able to determine pretty closely what the value will be.

Mr. DEMPSEY. My observation as a lawyer has been that you have to pay about four times the price in a condemnation proceeding at which a piece of property could be bought at private sale. I represented a railroad company and I never in my life found a case where we could not buy a piece of property very much cheaper by private purchase than when we had to acquire it by condemnation. And I do not believe you would find a lawyer of any experience who would not tell you the same thing.

Mr. FREAR. Mr. Dempsey's remark brings up that question I presented to the Colonel: Why are these proceedings brought in the State of Delaware before this particular court?

Mr. DEMPSEY. They have to; they only have jurisdiction. You can not confer jurisdiction on any court, anywhere.

Mr. FREAR. I do not think so. I think they have an absolute constitutional right there.

Mr. DEMPSEY. Yes; but part of this is in the State of Delaware.

Mr. FREAR. That is another matter. It depends on the place where it is located, of course.

The CHAIRMAN. I think the proposition of law Mr. Dempsey is expressing is this: That where property is situated in two States, we can confer jurisdiction on either one or the other.

Mr. FREAR. Of course.

The CHAIRMAN. As to this other proposition, that we could not confer jurisdiction where none of the property existed, I think it is probably well taken.

Mr. FREAR. I should think, if you are going to put this proposition through, if you will pardon my statement, that the provision as drawn is the proper one. The only other thing you could do would be to put in an amount which would not be exceeded in the negotiations; but you understand when you place in an amount you give notice to the other side you are willing to pay that amount anyway, and there is no reason in the world why we should not trust the Secretary of War in a matter of that kind.

The CHAIRMAN. When the report comes in, we can consider it.

Mr. FREAR. What is the present depth?

Col. NEWCOMER. The present depth is 9 feet.

Mr. FREAR. This would limit it to commercial purposes?

The CHAIRMAN. It does not mean to limit it to commercial purposes, because the report which has been submitted also sets forth its value for military purposes.

Mr. FREAR. What other purposes could it be used for?

Col. NEWCOMER. Of course, it would have a value for the movement of troops and supplies.

Mr. FREAR. What troops could be moved, and from where, by means of this canal?

Col. NEWCOMER. You have here quite a complex situation for the defense of Philadelphia, for instance, Baltimore, and Washington. You have different avenues of approach from which the enemy might attack—different places where they might make a lodgment—and you ought to have a very effective means for transferring your troops, munitions, and all supplies, which might tax a railroad, in connection with all of its other work, beyond due bounds. So that a waterway like this affords a connection between two important bodies of water, which of course have an outside route, but it is very much exposed and longer, and a short route would be a very useful element in the defense of the coast.

Mr. FREAR. Do you believe, with two of the greatest trunk lines in the country between Washington and Philadelphia, able to send a hundred trains a day, if necessary, with troops, that this canal, which can only be used at the rate of 4 miles per hour under the present regulations, could be used for the transportation of troops?

Col. NEWCOMER. Surely it could be.

Mr. FREAR. Do you think it would be? Do you think it worth while to make this large appropriation, which, I understand, will amount to about \$12,000,000, for that as an incident?

Col. NEWCOMER. Certainly, as one of the benefits. I think the movements of troops would probably not be as much as the movement of supplies. They are bulky and probably would require a considerable tonnage to handle them. Troops might be moved, of course—I do not know whether you heard Gen. Black, who testified before this committee, say that the Pennsylvania Railroad, which is one of the great trunk lines involved in this situation and also involved in the situation between Philadelphia and New York, favored a canal across New Jersey, because of the fact that they find themselves burdened with an amount of traffic that they simply can not accommodate effectively, and it wants relief.

Mr. FREAR. You mean at the present time?

Col. NEWCOMER. Yes; at the present time.

Mr. FREAR. At the present time all the traffic involved only amounts to about a million tons, doesn't it?

Col. NEWCOMER. Which canal are you talking about? I am talking now about the proposed canal between the Delaware River and New York Harbor, that goes through New Jersey, where we have quite a large number of trunk lines involved. I was just simply illustrating the fact that although we have rail facilities, those rail facilities are taxed to their utmost to handle the normal movement of cars.

Mr. KENNEDY. The present canal is not being used to capacity?

Col. NEWCOMER. Probably not.

Mr. HULBERT. You have already given that matter consideration. haven't you?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. And in the construction of that canal you contemplate some cooperation on the part of the States of New Jersey and Pennsylvania, don't you?

Col. NEWCOMER. Yes, sir. I think the Chief of Engineers recommended cooperation beyond a certain limit; in other words, that a 12-foot project should be put through there at national expense and similar in type to the barge canal.

Mr. HULBERT. Is not the State of New Jersey giving the right of way now?

Col. NEWCOMER. Yes. I thought you meant toward the improvement.

Mr. HULBERT. Now, why should a right of way from the State of New Jersey have been requested in the one instance and the Government purchase the right of way across the States of Delaware and Maryland in the other instance?

Col. NEWCOMER. In New Jersey it is simply the right of way without any actual work of improvement. Here it is buying an improvement in addition to right of way.

Mr. HULBERT. Doesn't the same principle cover some part of the existing canal across there?

Col. NEWCOMER. Oh, no; it is entirely different.

Mr. KETTNER. Mr. Chairman, the colonel just made the statement that in the one case there was a giving of the right of way, and in the other case you were purchasing an improvement.

Have the people of Delaware and Maryland offered to give the extra right of way that is needed to enlarge this canal to meet the requirements of the present project?

Col. NEWCOMER. I do not think anything of that kind has been done. Of course, as a matter of fact, you understand that the United States Government contributed to the cost of this thing originally—bought some of the bonds. So that they have already been involved, more or less, in this proposition.

Mr. KENNEDY. How long do you think it would take, in case this proceeding was put through, to complete the canal to a 12-foot depth?

Col. NEWCOMER. It would be a matter of certainly several years; possibly four or five years. I judge these proceedings authorized here, if they are authorized, would take fully a year. But there is no apparent reason why they should not proceed.

Mr. COSTELLO. Just let me straighten this out, if I can. There have been various investigations made for a canal across this peninsula. The engineers of the Government, after due investigation and expenditure of many thousands of dollars, have concluded that this acquirement of the Chesapeake & Delaware Canal was the most economical plan for the Government. The Sassafras route, you remember, was estimated to cost almost double what this will cost when we carry this to its ultimate conclusion. So that all the reports and all the investigations that have gone on for many years—the net result of them all is that this is the project for the Government. Of course, the States of Maryland and Delaware could give the right of way across the Sassafras River route, and still the Government's expenditure would far exceed anything here, and it would not be as available and would make the route, I guess, a little longer. So that when you sum up a tender giving something, you have to take into consideration all the conditions surrounding it. Some one might give you something that would be very much more expensive than if you started out and paid the cost of buying it in the first place.

Mr. KETTNER. I would like to have Mr. Costello's estimate of what this canal will cost.

Mr. COSTELLO. The engineers' estimate—I am not an engineer and have never made one myself—is that when the project is carried out to its ultimate conclusion it will cost about \$20,000,000. That is a tide-water canal.

Mr. KETTNER. Of what depth?

Mr. COSTELLO. I think 16 or 18 feet.

The CHAIRMAN. Gentlemen, you are speaking from memory now. The reports are available.

Mr. KETTNER. Mr. Costello misunderstood my question. What do you think a jury in Delaware would allow the owners of this canal, under condemnation proceedings?

Mr. COSTELLO. I was just explaining to one of our members my thought on that matter. The people of Delaware and Maryland, from my contact with them—I go through there a couple of times a year, on this canal—desire that the Government acquire it. They do not believe they have had proper treatment from the canal company, so that I believe if it goes to a condemnation proceeding, the witnesses, people who will be able to testify intelligently on this matter,

will be in a position certainly to give a fair and unbiased statement in regard to the value of this canal.

Mr. FREAR. If it were made a condition precedent that those States should furnish the canal in its present condition, with the idea that the Government should go on and improve it, in view of the fact that the Government and the States made their contribution originally, do you think that would be in any way an unfair provision, to insist on their contribution of the canal? The reason I ask that is because Philadelphia and Baltimore people are largely the ones who have urged it as a commercial project, and I was just asking if you think that would be an unfair condition precedent.

Col. NEWCOMER. I think the War Department is thoroughly in sympathy with the policy of requiring the right of way, the land rights, to be given. Of course, when you come to the question of requiring the actual work of the improvement, which has cost money, to be given free of cost, that is a different proposition. I do not think it has ever been presented; I do not think any condition of that kind has ever been imposed. Of course, whether it would be judicious here to impose a condition that the States or those localities should provide this improvement in its present state, with the idea that the Government go ahead and enlarge it and make it more efficient, is a proposition the War Department has never given any special consideration.

Mr. FREAR. The reason that I suggested that is because I know the Engineers have, out on the Pacific coast, required that the localities should cooperate.

Col. NEWCOMER. We feel it is a good policy. I think Congress has felt it a good policy to pursue, that the localities be required to cooperate. But it is a question of how far it should go in any particular case.

Mr. FREAR. That is what I am asking about this particular case: what is your judgment in regard to that?

Col. NEWCOMER. I have not given any special consideration to this case. I myself think it would be a great thing if in all cases the localities could be made to contribute toward an improvement, as a certificate of their opinion of the value of that improvement. I think that would be a great thing. But whether it would be just in any particular instance, or whether it would be practicable in this instance, is a different question. It certainly would be from my point of view as to the policy a desirable thing to do, if you consider it practicable procedure. I do not know in this instance whether those States have laws enabling them to take up a proposition of that kind.

Mr. COSTELLO. I suppose you are aware that the States of Pennsylvania, Maryland, and Delaware contributed originally to the building of this canal?

Mr. KETTNER. And the United States.

Mr. COSTELLO. And the United States. It does not affect the State of Pennsylvania as to the amount of benefit that might be derived as much as it does the rest of the United States from the point of view of transportation, as to what Congress might do.

Mr. HULBERT. There is a line of boats running out of there now?

The CHAIRMAN. We are discussing details now that do not affect the proposition, gentlemen.

Col. NEWCOMER. There is this one feature about this, that you must not consider this a local matter as affecting only Delaware and Mary-

land, for the reason that all the waterways of North and South Carolina which link up with the Chesapeake Bay would have this as their outlet to the Philadelphia and New York markets; so that it is not a matter confined to those two States.

The CHAIRMAN. I just want to make this statement to the committee: We have been discussing some details that will come up for subsequent consideration if a report for this authorization shall be made to Congress. Looking at it from its broad standpoint, this is a very important project. It has been surveyed and reports have been made a number of times, and in each instance a favorable report. And I doubt if one could read those reports in an open-minded way without agreeing with the various boards which have investigated and reported.

This particular project connects with the Delaware River one of the busiest rivers in the United States. I think that is a fair statement.

Mr. HULBERT. Is it a busier river than the East River?

The CHAIRMAN. You could hardly call that a river there.

Mr. HULBERT. Why? It has three—nearly four—times the commerce of the Delaware River.

The CHAIRMAN. It is not my intention to make invidious comparisons. The Delaware River, as everybody knows, is a river with a large commerce.

Mr. HULBERT. And a river which is receiving large appropriations while the East River is not getting any.

The CHAIRMAN. It has a very large commerce—local, domestic, and foreign. The Chesapeake Bay is one of the great bays in the United States, and has tributary to it Baltimore and Norfolk as well as other cities. This present canal, owned by private interests there, has only a depth of 9 feet; its locks are limited to a width of 24 feet. Barges have to be constructed to adjust themselves to those locks; and you will notice that the barges which pass through there are long and narrow. And yet, with all of those restrictions, the commerce it does now is very considerable. And if we made it a sea-level canal, as it would be according to the plan recommended by the engineers, with a depth of 12 feet, that would answer very many of the requirements of commerce and, to a limited extent, the military necessities.

I think it is so important a project that it is worthy of the consideration of this committee and worthy of the consideration of Congress.

Looking at it also from the broad standpoint, one of the very important projects of the country is the connecting of the Delaware River with New York Bay, across the State of New Jersey; and that ought to be taken up, and probably should be taken up, along with the proposition of connecting the Delaware with Chesapeake Bay. They are both very important projects commercially and from a military standpoint, and it is well worth the time of the committee to read those reports and familiarize themselves with all the conditions.

Mr. FREAR. May I just make the statement, as long as the chairman has stated his view, that I have not discussed the merits of the proposition. My question to the colonel was merely for the purpose of ascertaining from what viewpoint the engineers look at it. I think I have taken this up with a free and open mind, because, naturally, I have no prejudice as regards the proposition. I have been through the canal; and I know the result of all this work will be to validate those bonds and stock and make it a going proposition for

the people who hold them. I can not understand or agree with the chairman in regard to the merits of the proposition, and I am not going to discuss that, because I do not think it proper; but I want to say there is a diverse opinion.

(The committee thereupon adjourned to to-morrow, Wednesday, May 2, 1917, at 10 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Wednesday, May 2, 1917.

The committee met at 10 o'clock, a. m., Hon. John H. Small (chairman) presiding.

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

The CHAIRMAN. Gentlemen, I will read the next item:

Baltimore Harbor and Channels, Maryland: For maintenance of Patapsco River and Channel to Baltimore, including channel of approach at York Spit, Chesapeake Bay, \$104,000; for improvement in accordance with the report submitted in House Document Numbered Seven hundred and ninety-nine, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$250,000; and the Secretary of War is hereby authorized to prosecute maintenance work in the inner harbor in accordance with the recommendation submitted in said document; in all, \$354,000.

Mr. KENNEDY. Colonel, I take it that is a military necessity, too, is it not?

Col. NEWCOMER. I do not know that the military necessity here overshadows the commercial importance. Of course, you have here the question of getting the naval vessels to those coal piers and that is a particular military necessity so far as the Navy is concerned. They do get a great deal of coal there and the larger colliers require more water in the Curtis Bay Channel. Of course, the general proposition is for increased anchorage, and that is mainly a commercial proposition, but it has that military element.

The CHAIRMAN. If there are no further questions, I will read the next item:

Rockhall, Queenstown, Chatham, Tilghman Island, Cambridge, and Crisfield Harbors, Elk and Little Elk, Chester, Corsica, Choptank, Tuckahoe, Warwick, La Trappe, Tred Avon, Wicomico, Manokin, Big Annemessex, and Pocomoke Rivers, Slaughter, Tyaskin, and Broad Creeks, Twitch Cove and Big Thoroughfare River, and Lower Thoroughfare, Deal Island, Maryland, Nanticoke River (including Northwest Fork), Delaware and Maryland, and Broad Creek River, Delaware: For maintenance, \$15,800.

Mr. FREAR. May I ask the Colonel a question here?

The CHAIRMAN. Certainly.

Mr. FREAR. There are about thirty different projects named here and they are all lumped together. What is the purpose of placing so many in this group?

Col. NEWCOMER. They are all on what is known as the Eastern Shore of Maryland. There are a number of small projects, none of them expensive, and it is desirable to have them all lumped together, on the same proposition I illustrated yesterday, so that the sum which is made available can be distributed as necessity arises.

Mr. FREAR. But this has never been done before.

Col. NEWCOMER. Some of them have been grouped together before.

Mr. FREAR. Yes; I have the old bill in front of me.

Col. NEWCOMER. The old item included quite a number of them.

Mr. FREAR. But we have never had before one that included 30 items.

Col. NEWCOMER. No; I think not.

Mr. FREAR. There were 6 or 8 in the old item. I have the old bill before me, and there were 6 or 8 in the item on page 10 of the old bill.

Col. NEWCOMER. Yes.

Mr. FREAR. My thought is this, as I said before: If we enlarge these groups in this way, it will be impossible hereafter, I take it, no matter whether a project is considered valueless or not, to ever get it out of the bill, because you are now taking so many and placing them in one group. There is nothing indicated here as to how much is to be spent on any of these projects.

Col. NEWCOMER. I will say, Mr. Frear, that information is furnished in the annual report—how much we expect to put at each place.

Mr. FREAR. That is done subsequent to the passage of the bill by the House.

Col. NEWCOMER. Oh, no; prior to passage by the House. That estimate is here.

Mr. FREAR. Let me ask you how much will go to Rockhall?

Col. NEWCOMER. In this particular case?

Mr. FREAR. Yes.

The CHAIRMAN. There is nothing recommended for Rockhall.

Mr. FREAR. Then why is Rockhall put in this group, unless, as you say on page 27, you can take, if you desire, any part of that amount and transfer it to Rockhall. You can do that under that general principle.

Col. NEWCOMER. Yes, if desirable.

Mr. FREAR. Then, as I say, how can the committee determine what amount is going to any of these projects?

Col. NEWCOMER. I do not know that you can determine in advance what exercise of discretion might be made by the Secretary of War and the Chief of Engineers under the authority granted by Congress. That, of course, is impossible. The Chief of Engineers and the Secretary of War do not know that in advance.

Mr. FREAR. So that it is practically left in the hands entirely of the Secretary of War and the Chief of Engineers.

Col. NEWCOMER. I would not say entirely.

Mr. FREAR. In what way are they limited?

Col. NEWCOMER. We report to Congress in our estimates for the year what we propose to do at each of these places, and according to the best information we have at the time that will be the thing to be done, and Congress appropriates money on that basis. That is the expected expenditure, but you give us authority, if this proposition goes through, to vary that program as the necessities of the case may develop; and the changes are reported in the next annual report, and you can constantly keep tab on us in that way. If you wish to cut

out any unworthy project, which you deem unworthy, at any time, you can leave out the names.

Mr. FREAR. Rockhall is not going to get anything, so there is no object in cutting Rockhall out. Let me say that I have no reference to these particular items, but I am just trying to get at the policy, which is a new policy presented to the committee, so we can understand it fully.

Col. NEWCOMER. You will understand, Mr. Frear, so far as this estimate is concerned, it is not a new policy, because you have had a number of similar ones grouped together before.

Mr. FREAR. But nothing like what you have attempted to do here. Here are 30 different projects, averaging about \$500 apiece, and you reserve to yourselves the right to change and transfer any fund you wish to any of the items under this particular group, and the committee has no knowledge of what will be done. Now, I am not questioning or impugning motives; I am simply trying to ascertain the policy. Of course, it is only \$15,000, but if it was \$150,000 the principle would be the same, of course.

Col. NEWCOMER. Do you not observe that the principle is exactly the same as obtained before? This is simply an extension of the same policy we had before.

Mr. FREAR. You might say that all of the projects in this River and Harbor bill be grouped together without reference to any particular locality and the same power be given you. Why should you place the limitation upon this group of 30 projects? Why not have the whole 200 projects grouped together with a lump sum?

Col. NEWCOMER. I would not object to having a lump sum for all maintenance work.

Mr. SWITZER. That is what you have advocated heretofore.

Mr. FREAR. Yes; in trying to put a limitation on expenditures I have done that.

Col. NEWCOMER. The point is we have grouped them for administrative purposes in the same geographical vicinities and under the same district officer, so that the fund provided could be in the hands, ordinarily, of one man, and he can judge best of the relative merits. Of course, we act usually upon the information furnished by him. I believe it is a more workable proposition on that basis, keeping Congress informed as to the distribution of the money, than it would be on the other basis. However, as I say, I personally would have no objection to your doing it the other way if you desired to do so.

Mr. KENNEDY. That is, you would not have any objection to our appropriating a lump sum for maintenance?

Col. NEWCOMER. I would not.

Mr. COSTELLO. Colonel, there is a reduction in dollars and cents of about \$12,000 and an increase in the number of items over the bill of last year. My friend Frear over there raises the question, but I take it that Rockhall is not estimated to cost anything on this fund, and there is no amount set aside for it in your recommendation.

Col. NEWCOMER. Exactly.

Mr. COSTELLO. But this money could be made available for any of these places that are set forth here if the necessity required it.

Col. NEWCOMER. If the contingency arises; yes.

Mr. COSTELLO. Therefore, from the engineer's point of view, the elasticity which exists here is something that will contribute to the good of the Government?

Col. NEWCOMER. That is our idea.

Mr. COSTELLO. Because you have leeway sufficient to apply it, if the necessity occurs, at any of these places.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That being true, Colonel, why would it not be perfectly proper to include lines 12, 13, 14, 15, and 16, which follow, and which provide \$30,000 for the Potomac River and other places, notwithstanding the fact that two districts would be taken in? Why would not that be perfectly proper?

Col. NEWCOMER. The only objection I would have particularly would be the one I have just stated. It would involve another district.

Mr. FREAR. But, if you desired, you could take it from one district and turn it over for work in another district, and that would be more convenient, would it not?

Col. NEWCOMER. As I said before, I personally see no objection whatever to granting a maintenance fund which would be available all over the country, if Congress desires to proceed to that limit.

The CHAIRMAN. Are there any further questions on this paragraph?

Col. NEWCOMER. I think there is one statement I would like to add, Mr. Chairman, which I do not think was brought out in yesterday's discussion of the question of policy in grouping items together. It is particularly pertinent to this situation. On the Eastern Shore of Maryland there is a perfect network of waterways which is thronged with fishing craft of different kinds. The whole livelihood of the people there is bound up in the fishing industry, so that it is a matter of great importance, yet each individual case is a matter more or less insignificant as to cost. Now, we show here by this grouping of items that that whole section is being taken care of in this annual bill by this amount of \$15,800. In other words, I think it is a fairer proposition than it would be to simply put in one or two items which might be involved in this particular sum, indicating you are only taking care of one or two items. As a matter of fact, this bill this year, in appropriating the sum provided, is taking care of the annual needs of all of these places, and I think it is well enough that all those places should appear in the bill.

Mr. FREAR. My criticism, Colonel, was only directed to this point: When a project apparently is unworthy to any Member of the House, they are unable to point out why it should be dropped because no specific amount is set aside for that project. You say the engineer has determined what he will allow, but the engineer may not have determined to allow anything, and under the provision which is contained on page 27, he may allot the whole amount to that project, if he sees fit, so that the difficulty is that we can not determine anything about the amount of money that is supposed to go to these projects, if any at all.

Col. NEWCOMER. But you can, Mr. Frear. That is just the point I made before. You can determine just as you did before exactly what is proposed to be expended there, because that is all given in

the annual estimates. The annual estimates show which one of these items is involved, and by going to that source of information you can tell what we propose to expend, although you do give us the discretion to vary that.

Mr. FREAR. Let me ask this question to make sure whether I am right about it and that we understand each other. You have here in this item \$15,800. In the old bill you had \$27,100, which is about \$12,000 more, for a smaller number of items, and that was based upon your report, so that this \$15,800 is only a small portion of what you have recommended as necessary for these items in your report. Is it not?

Col. NEWCOMER. We have cut out certain items here which were for the improvement of the Wicomico River and the Big Annemessex River. This item of \$15,800 is the sum of the items reported for maintenance on page 12 of your book. I think I can pick out from the bill the number. For instance, there was for maintenance before a group of 12 items—

Mr. FREAR. Yes; I understand that. There are about 29 or 30 in the present group.

Col. NEWCOMER (continuing). And the amount for maintenance in that group was \$10,000. Then we have added in other items; for instance, Lower Thoroughfare has an item of \$3,000, and Corsica River, Md., \$2,800. That shows just which items are included. The 12 items which were in before took \$10,000, the Lower Thoroughfare \$3,000, and the Corsica River \$2,800.

Mr. FREAR. On page 12 there is \$14,800 for the group of items in Maryland, and \$3,000, as you say, for Lower Thoroughfare, which makes \$17,800; then \$2,800 for Corsica River, which would be \$20,000. Now, we find on page 8 of this bill \$15,800, so that the two do not correspond, necessarily.

Col. NEWCOMER. The amount for the group in the book prepared for the committee which footed up \$14,800 was cut down by the committee to \$10,000. The committee did not allow the amount estimated. They allowed \$10,000 for that.

Mr. HULBERT. And you have added to that two items, one of \$3,000 and one of \$2,800, which makes the \$15,800?

Col. NEWCOMER. Yes.

Mr. KENNEDY. Of course, that reduction was brought about by the fact that the committee thought the maintenance charge too heavy at those places for the very small commerce.

Col. NEWCOMER. I do not recall now, Mr. Kennedy, the details of that transaction. I, of course, was with the committee before when they made that reduction, and it may have been made at my suggestion, upon later information, I do not know; but it was made by the committee as a result of the information furnished them.

Mr. KENNEDY. We cut out a few items because we thought the maintenance charge was entirely too heavy for the commerce carried by the stream.

Col. NEWCOMER. Yes; you reduced the amount \$4,800 at that time, and of course the same thing may occur in the future. In other words, when a representative of the Office of the Chief of Engineers appears before the committee which is preparing the bill, he comes, of course, with information which is usually six months later than the estimate in the annual report, and that may, in some instances,

modify the estimate. I know in some cases the committee has reduced the amount without any additional information. They have simply exercised their discretion in the matter and allotted a different sum.

Mr. KENNEDY. Colonel, in case the committee wanted to cut out some item, all it would have to do would be to strike the item out of the bill and the maintenance appropriation would not apply to it?

Col. NEWCOMER. Yes; that would accomplish that purpose.

The CHAIRMAN. Colonel, assuming that this paragraph as it is written here should be favorably reported and became a law, and you came to administer it in the War Department, how would you administer or expend this fund?

Col. NEWCOMER. We would primarily, of course, make a distribution of it in accordance with the estimates, if those estimates had been approved, on the basis that that represents the needs as known at the time. Now, if a different situation should develop, and we find we need more at one place and less at another, or that we needed something where before we anticipated the need of nothing, we can allot it in case of need, if the fund is sufficient for the purpose. And not only does it have that advantage—I do not know that it is necessary to go into this because it was gone into yesterday.

The CHAIRMAN. There is no reason why it should not be repeated. I have just one other question. Each one of these items in this paragraph for which a gross sum is appropriated for maintenance has been heretofore under improvement by the United States?

Col. NEWCOMER. Oh, yes.

The CHAIRMAN. So that we are not taking in any project which has not been heretofore improved by authority of Congress?

Col. NEWCOMER. No, sir. In this item as it passed the House and as it was introduced in the Senate there were two items for additional improvements which have been cut out as deemed not essential at this time.

Mr. TREADWAY. How much inconvenience has the board experienced under the old system of practically allotting maintenance items for each individual item rather than under the group system which you are now advocating?

Col. NEWCOMER. I do not know that it has made any essential difference to the board at all. We have had in before a number of group items. You will see them all through the book here, and I do not know that it has made any difference. It is a matter for the committee to say whether it has embarrassed them in any way whatever because the amounts proposed for these items are set forth, and it is simply a question of enacting it in group form instead of the other form.

Mr. HULBERT. Mr. Chairman, if I may, I would like to ask one question for general information. In this paragraph there are 29 or 30 items. Suppose the committee should determine against this policy of grouping all these items, then in order to get at the amount which we should allow for maintenance would we go back to the items of the old bill?

Col. NEWCOMER. We have simply taken the items in the old bill and grouped them, so that would be the procedure.

The CHAIRMAN. In the last bill we grouped 12 of them, as you will find on page 12 of your book.

Mr. HULBERT. Is all of that amount necessary?

Col. NEWCOMER. Yes, sir; we think that amount is necessary. Of course, it is like any other estimate for maintenance in that it is based upon our best information.

The CHAIRMAN. The next item is—

James, Nansemond, Pagan, and Appomattox Rivers, Va.: For maintenance, \$26,000; continuing improvement of James River, \$46,000; in all, \$72,000.

Mr. KENNEDY. I would like to ask a question in regard to the James River item.

The CHAIRMAN. Certainly.

Mr. KENNEDY. As I understand it, there is a modification of that James River project recommended in the report, is there not?

Col. NEWCOMER. Yes, sir.

Mr. KENNEDY. But this sum recommended now, as I understand it, is the same that appears in the bill that was prepared last winter to continue on the old project?

Col. NEWCOMER. It continues, of course, under the old project, but it does not contemplate any work beyond what is included in the recommended modification. In other words, the recommended modification simply reduces the project depth from 22 feet to 18 feet, and all the work has been confined practically to a depth of 18 feet. We have gone through at that depth, and the money that it is proposed to expend here is to be used within that limit. You will recall that the work recommended involved a further expenditure of something like \$500,000.

Mr. KENNEDY. That is for an 18-foot channel and the cutting out of curves?

Col. NEWCOMER. Yes, sir; that is the first work needed, and it will be the first work done.

Mr. KENNEDY. This work that is contemplated here would be done within the new project that has been recommended?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Since you were here last February, has there been any application made, so far as you know, to the board of review for a reconsideration of the modification of that project from 22 feet to 18 feet?

Col. NEWCOMER. It has not gone back to the board.

The CHAIRMAN. In the last bill, the committee gave considerable attention to the completion of a diversion channel or dam at Petersburg?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. One of the Representatives from Virginia, Judge Watson, I believe, was before the committee, and provision was made for that. Now, that is not included in the present estimate.

Col. NEWCOMER. No, sir; it is not.

The CHAIRMAN. For what reason did you omit that?

Col. NEWCOMER. We did not consider that it was an item that was particularly urgent. This matter is simply waiting there, and has been waiting for four years for the locality to do some work which they have not done, and we did not feel that it was incumbent upon the United States to consider that as an emergency measure.

The CHAIRMAN. Is the work which was to be done under local co-operation such work as must be done at the same time that the Government work is done?

Col. NEWCOMER. It has to precede it.

The CHAIRMAN. And they have not yet done their local work?

Col. NEWCOMER. I understand that they have made provision for doing it, but it has not been actually accomplished.

The CHAIRMAN. Suppose they should do their part of the work under local cooperation, as may be required, and a number of months should elapse, say, 6 months or 12 months, before the Government does its work. In the meantime, by reason of the delay, would any deterioration result in the work that they might have done?

Col. NEWCOMER. No, sir; it would not affect their work.

The CHAIRMAN. I am only asking these questions in order to make it clear to the Virginia Representatives.

Col. NEWCOMER. The completion of the diversion dam is necessary simply to make easier the maintenance of the channel in front of Petersburg. The diversion dam there has not been completed, because the local work that was required to be done had to precede the Government work. It simply means that the channel would be subject to the deterioration that it has been subject to for a number of years, and that it would require more for maintenance. It is desirable to complete the diversion dam as soon as the other work is done, but it is not regarded as especially urgent.

The CHAIRMAN. The next item is—

Blackwater River, Virginia, Meherrin and Roanoke Rivers, and Newbegun Creek, North Carolina: For maintenance, \$2,500.

Col. NEWCOMER. Newbegun Creek should be stricken out. It was left in there by error. In the last Congress there was inserted an item for the improvement of Newbegun Creek, and in striking out the amount we neglected to strike out the name, and the name should be stricken out. Of course there is nothing appropriated for it.

The CHAIRMAN. The improvement of that creek is omitted from these recommendations?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is—

Waterway from Norfolk, Virginia, to Beaufort Inlet, North Carolina: Continuing improvement, \$100,000: *Provided*, That the route of the waterway may, in the discretion of the Secretary of War, be modified in accordance with the report submitted in House Document Numbered Fourteen hundred and seventy-eight. Sixty-third Congress, third session: *And provided further*, That not more than \$75,000 shall be expended in acquiring the necessary rights of way between Albemarle Sound and Pungo River.

Mr. FREAR. What has been done in regard to the land required for right of way? About 800 acres was required, and the question came up whether local contributions for the land would be secured. What is the status of that now? I notice this provision that not more than \$75,000 shall be expended in acquiring the necessary rights of way between Albemarle Sound and Pungo River.

Col. NEWCOMER. We have not received any report from the district officer. Of course, we have not been authorized yet to proceed toward acquiring any land, because we have been waiting for this legislation. However, I have just been informed that there is a prospect—in fact, Mr. Small told me that he had information indicating that there is a prospect of getting this land at a very low price, as low as \$3 per acre, which is below the estimate made.

Mr. FREAR. Then, is that large amount of \$75,000 necessary, do you think?

Col. NEWCOMER. The amount estimated before, I think, was \$150,000 for right of way, but that was cut in half by the committee because they thought the other amount was too great. I am not in a position really to give you precise information as to whether \$75,000 is required for that purpose or not. We had, at first, left out this item, but concluded that there was some question as to whether the appropriation which we had unexpended would be sufficient to finish the waterway between Norfolk and Albemarle Sound. It is necessary to go through there in order to reach the connecting waterways to Pamlico Sound. We have funds already provided that were expected to complete that, but there is some question as to whether they will be sufficient on account of the general increase in prices and in the cost of work. The \$100,000 now proposed will insure the completion of that section, and we think will be sufficient to acquire the right of way for the other.

Mr. FREAR. How much have you now on hand of that appropriation?

Col. NEWCOMER. Mr. Brooker can probably give you that amount.

Mr. BROOKER (the clerk). The available balance is \$172,000.

Col. NEWCOMER. We have made contracts covering a large part of that appropriation, and this available balance of \$172,000 is for the operation of the Government plant. We are doing that work both by contract and by Government plant.

Mr. FREAR. What is the change proposed here? I have an indistinct recollection of this House Document No. 1478.

Col. NEWCOMER. The original plan adopted by Congress; that is, the existing project, provides for a channel through Alligator River to Rose Bay, while the revised route goes through Alligator River to Pungo River and Pamlico Bay.

Mr. FREAR. That has not been determined at this time?

Col. NEWCOMER. That modification has not yet been approved.

Mr. HULBERT. Does this modification abandon any right of way that has been already acquired?

Col. NEWCOMER. No, sir.

Mr. HULBERT. Will \$75,000 cover all the right of way that has to be acquired?

Col. NEWCOMER. It is to be expected that it will, from the best information, but we do not know positively.

Mr. DUPRÉ. As I recall the bill last year, there was appropriated \$1,000,000 for continuing the improvement?

Col. NEWCOMER. Yes, sir.

Mr. DUPRÉ. And you have reduced that to \$100,000?

Mr. NEWCOMER. Yes, sir.

Mr. DUPRÉ. Why?

Col. NEWCOMER. It was expected that the work would proceed vigorously upon the acquisition of the right of way, which was expected to take six or seven months. It was then expected to go ahead with the construction of the route, but this provision omits any actual work of construction. We estimate that this will probably be sufficient to finish the other link and to acquire the right of way. When we go into Albemarle Sound from Norfolk by the link now approaching completion we can have access to Pamlico

Sound through Croaton Sound, with a depth of between 9 and 10 feet, which, of course, will give a means of communication. In fact, that is the route now followed by the commerce that originates on Pamlico Sound and that comes north to Chesapeake Bay.

Mr. DUPRÉ. In other words, the department has pared that recommendation down to \$100,000?

Col. NEWCOMER. That is because of the emergency situation and because this is an emergency bill.

The CHAIRMAN. The next item is:

Manteo and Thoroughfare Bays, Scuppernong, Pamlico, Tar, South, Bay, Neuse, and Trent Rivers, Fishing, Contentna, Swift, and Smith Creeks, and waterway connecting Swan Quarter Bay with Deep Bay, North Carolina: For maintenance, \$15,500.

Mr. FREAR. That is the first case where they have been grouped together?

Col. NEWCOMER. Yes, sir; I believe so.

The CHAIRMAN. The next item is:

Beaufort and Morehead City Harbors, waterway from Pamlico Sound to Beaufort Inlet, waterway connecting Core Sound and Beaufort Harbor, inland waterway, Beaufort to Jacksonville, and Beaufort Inlet, North Carolina: For maintenance, \$35,500; and the unexpended balances of appropriations heretofore made for New River, North Carolina, are hereby made available for the improvement of the inland waterway, Beaufort to Jacksonville, in accordance with the report submitted in House Document Numbered seventeen hundred and seventy-five, Sixty-fourth Congress, second session.

Mr. HULBERT. Is that route from Beaufort to Jacksonville a new project?

Col. NEWCOMER. No, sir; it is a new name for an old route.

Mr. HULBERT. It was not in the bill that we passed last February, was it?

Col. NEWCOMER. No, sir.

Mr. HULBERT. Why do you put it in this bill?

Col. NEWCOMER. It was put in by the Senate. It was in the Senate bill as introduced in the Senate by the Senate Committee on Commerce.

Mr. HULBERT. In other words, in making up this bill, have you adopted the plan of taking in the items that were added by the Senate to the bill that was made up by this committee last February?

Col. NEWCOMER. We adopted the policy of taking the Senate bill as the basis for consideration in preparing this emergency bill. This item that is introduced here is simply a proposition to recognize an existing situation there. There is a project for the New River which provides an outlet to the Atlantic Ocean for traffic going around to Wilmington, but, as a matter of fact, the inlet can not be maintained, and the New River traffic has gone north to Morehead City and Beaufort through this inland waterway that lies between Beaufort and Jacksonville, and the proposition now is simply to make the money appropriated for New River available for this better connection by this inland waterway.

Mr. HULBERT. What was the former name of this improvement? You say that this is an old improvement under a new name?

Col. NEWCOMER. It was in three sections before. You will find it on page 574 of the report. Item A appears on page 574 under the head of "New River"; on page 576 you will find item B, "Waterway

between New River and Swansboro," and on page 578 you will find item C, "Waterway between Beaufort Harbor and New River, North Carolina (i. e., portion between Beaufort and Swansboro)." Those are the three different items in that one route.

Mr. HULBERT. I want to call your attention to this statement under the subhead "(A) New River," on page 575:

It is not proposed to prosecute the existing project actively, as the funds on hand are believed to be inadequate. No estimate for additional appropriation is submitted.

Under the subhead "(B) Waterway between New River and Swansboro," on page 577, this statement appears:

The funds available June 30, 1916, will be exhausted about December 30, 1918. It is proposed to apply the funds on hand to purchase of equipment for U. S. Dredge *Croatan* and maintenance of the channel by dredging with United States plant and hired labor during October, November, and December of 1916, 1917, and 1918.

Then, under subhead "(C) Waterway between Beaufort Harbor and New River, North Carolina," etc., on page 579, this statement appears:

It is proposed to apply the funds on hand to purchase equipment for the U. S. Dredge *Croatan* and maintenance of the project by dredging with United States plant and hired labor during January, February, and March of 1917 and 1918.

Now, what is the particular urgency of this work, in accordance with the report submitted in House Document No. 1775, Sixty-fourth Congress, second session, at this time?

Col. NEWCOMER. That will not involve any additional appropriation. As I have stated, there is now a route leading from Jacksonville on the New River through the New River inlet to the ocean, and there is a balance of between \$6,000 and \$7,000 on that project, which is not sufficient for carrying out that project and giving the proposed depth to that inlet. We have a channel there 250 feet wide and 5 feet deep. Now, it is found that that channel can not be provided from the funds available. Moreover, since that project was adopted the traffic no longer attempts to pass through that inlet out through the ocean to Wilmington, but it goes through that inland waterway to Morehead Harbor and Beaufort, and we want to get a better connection between New River and that inland waterway. We can accomplish that connection with the funds now on hand for New River, but which are inadequate for carrying out the other project, and, in fact, that other project should not be carried out.

Mr. HULBERT. What items in this bill that passed the House last February and not carried in this proposed bill, make up that \$35,500?

Col. NEWCOMER. The item for Beaufort Harbor—

Mr. HULBERT. That was \$4,500.

Col. NEWCOMER. Beaufort Harbor, for maintenance, \$4,500; Beaufort Inlet, for maintenance, \$14,000; and Morehead City Harbor, for maintenance, \$2,000. Then the item for the waterway from Pamlico Sound to Beaufort Inlet was \$14,000, I think.

Mr. HULBERT. That makes up the \$35,500.

Col. NEWCOMER. The waterway between Beaufort and Jacksonville has the smallest project depth of any waterway in the United States.

Mr. HULBERT. What is the depth?

Col. NEWCOMER. In a part of the waterway it is from 3 to 4 feet at high water.

Mr. HULBERT. How much is it at low water?

Col. NEWCOMER. It has a range of from 1 to 3 feet. It is just for small boats. In a part of the waterway, of course, there is a greater depth. There is a greater depth as you pass through the sound. But they have found that with this waterway, small as it is, they can get through and accommodate the modest commerce there, which, I think, is from 20,000 to 30,000 tons.

Mr. HULBERT. Is that the project depth?

Col. NEWCOMER. A part of it is 3 feet at low water, and a part of it is 4 feet at high water. It is only for small craft.

Mr. DUPRÉ. As I understand it, in these matters of maintenance you have practically the same amounts that were recommended and approved in last year's bill.

Col. NEWCOMER. The same amount that was approved.

Mr. DUPRÉ. Not only in this item, but as a general proposition?

Col. NEWCOMER. In all cases.

Mr. DUPRÉ. Where there is a bunching, so to speak, of various projects, the total sum is simply the sum of the different items that were provided for in a separate way?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. You say that is true in all cases, but by that you mean in all cases where the estimates were retained in the bill?

Col. NEWCOMER. We have retained all of the maintenance items.

Mr. HULBERT. You did not retain the maintenance estimate for the Harlem River.

Col. NEWCOMER. That was for improvement, not for maintenance.

Mr. HULBERT. It was for continuing improvement.

Col. NEWCOMER. Yes, sir; but that is a different proposition.

The CHAIRMAN. Mr. Frear, you wanted to ask Col. Newcomer about this item a while ago.

Mr. FREAR. I think it was just about the amount on hand, and I believe Col. Newcomer has stated it already.

The CHAIRMAN. I think he said it was between \$6,000 and \$7,000.

Mr. HULBERT. How much of the unexpended balance under this project is available for the improvement of that inland waterway? You distinguish that from maintenance, do you not?

Col. NEWCOMER. Yes, sir; it is a new project and it involves a new appropriation. It is simply a better use of the money on hand, and I think it is advisable to use it that way.

The CHAIRMAN. The next item is:

Northeast, Black, and Cape Fear Rivers, N. C.: For maintenance, \$85,000; completing improvement of Cape Fear River below Wilmington, \$35,000; in all, \$120,000.

Mr. HULBERT. What is the particular urgency of this item at this time? Is it for commerce or is it connected with the national defense?

Col. NEWCOMER. Wilmington Harbor, of course, is a very important outlet for commerce, particularly with reference to fertilizers in this case. Fertilizer is the heavy item of commerce on that river, and it is very desirable, of course, to make this improvement.

The CHAIRMAN. If there are no other questions, we will pass to the next item:

Charleston Harbor and Channels, South Carolina: For maintenance, \$40,000; for improvement in accordance with the report submitted in House Document Numbered Two hundred and eighty-eight, Sixty-second Congress, second session, and subject to the conditions set forth in said document, \$70,000; for maintenance of Ashley River Channel, \$10,000; in all, \$120,000.

Mr. FREAR. May I ask a question with regard to the item we have just passed? I have been trying to ascertain about this item of \$85,000 for maintenance of the Northeast, Black, and Cape Fear Rivers. There is nothing in the other bill which is clear to me. There was an item of \$115,000 in the other bill, but why is this amount of \$85,000 left in the bill for maintenance of the Northeast, Black, and Cape Fear Rivers, lines 10, 11, and 12 of page 10 of the bill?

Col. NEWCOMER. The bill as passed by the House carried an item for Cape Fear River, at and below Wilmington, for completing the improvement and for maintenance, of \$115,000. As a matter of fact, of that amount \$35,000 was for continuing or completing the improvement and the other was for maintenance, and we have simply separated it here.

Mr. FREAR. That included the two items, then?

Col. NEWCOMER. Yes.

Mr. HULBERT. The other item included the maintenance and the improvement both?

Col. NEWCOMER. Yes; before the projects were grouped together.

The CHAIRMAN. If there are no further questions, we will proceed with the next item:

Winyah Bay, Waccamaw, Little Peedee, and Great Peedee Rivers, South Carolina: For maintenance, \$70,000.

Mr. FREAR. That has been cut from over \$80,000.

Col. NEWCOMER. Yes.

Mr. FREAR. Was not the other for the improvement of the Winyah Bay project?

Col. NEWCOMER. We left in the item for maintenance of Winyah Bay and cut out the item for the improvement there. We have the channel at project depth, and the additional work proposed is the construction of a training wall in order to reduce the expense of maintenance. We thought that the \$80,000 might for the time being be left out.

Mr. FREAR. What is the item for maintenance for Winyah Bay, if I may ask?

Col. NEWCOMER. \$65,000.

The CHAIRMAN. If there are no further questions, we will pass to the next item:

Santee, Wateree, and Congaree Rivers, South Carolina: For maintenance, including the Estherville-Mintin Creek Canal and the Congaree River as far up as the Gervais Street Bridge, Columbia, \$30,000.

Mr. TREADWAY. May I ask the immediate need of this appropriation, Colonel?

Col. NEWCOMER. This is mainly for use on the Congaree River. You know that from Columbia out they are maintaining a barge line, and the Columbia merchants claim, of course, that it is a matter of great importance for them to have that barge line in operation, and this is mainly for maintenance work on the Congaree River. In the

last bill there was an additional improvement authorized, but we left that out because we thought it was not sufficiently urgent.

The CHAIRMAN. If there are no further questions, we will take up the next item:

Waterway between Beaufort, South Carolina, and Saint Johns River, Florida: For maintenance, \$43,000.

Mr. HULBERT. Colonel, what is the relation of this waterway to the waterway which you termed the waterway from Beaufort to Jacksonville?

Col. NEWCOMER. That was from Beaufort, N. C., to Jacksonville, N. C., a very short waterway. We have here grouped together three sections of the waterway which were formerly reported separately; that is all.

The CHAIRMAN. If there are no further questions, we will take up the next item:

Savannah River, below, at, and above Augusta, and Savannah Harbor, Georgia: For maintenance, \$380,000; for improvement of Savannah Harbor in accordance with the report submitted in House Document Numbered Fourteen hundred and seventy-one, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$500,000: *Provided*, That no expense shall be incurred by the United States for acquiring any lands required for the purpose of this improvement; in all, \$880,000.

Mr. FREAR. With regard to this \$500,000 item, Colonel, what is the importance at this particular time of this improvement? This is above Savannah, as I recall?

Col. NEWCOMER. No, sir; below; that is, it is at the Savannah Harbor.

Mr. FREAR. Savannah Harbor has been extended, has it not?

Col. NEWCOMER. No, sir. We include in one item here all of Savannah River which, of course, includes Savannah Harbor, and the Savannah River below Augusta, which extends from Savannah to Augusta and the Savannah River above Augusta.

Mr. FREAR. Is this for an extension of the depth, or what is it?

Col. NEWCOMER. This new project is to provide additional depth over the bar, and also some anchorage space inside. You will remember that that is a 400-foot channel, and it is very crowded. There is no place to turn vessels, and we want to have a turning basin and an anchorage ground, and the other matter of special importance is that the maintenance cost of this project is running very high on account of the deterioration of the training walls and controlling works which were built a number of years ago. The work in recent years has been confined almost entirely to dredging. Those training walls need to be built up and extended in order to reduce this very high cost of maintenance.

Mr. FREAR. What are those walls, may I ask? Are they for the protection of the land?

Col. NEWCOMER. No; they are for the protection of the channel, cutting off the side outlets, and other places where the silt is brought into it. They are usually mattress and pile structures, or timber structures and stone.

Mr. GRAY. How long would it take to complete that project?

Col. NEWCOMER. The project involves a total expenditure of something like \$2,000,000, including the maintenance work during that time, of course.

Mr. GRAY. About how long would it take?

Col. NEWCOMER. It would take about four years on a program like this.

Mr. GRAY. That is what I wanted to know.

Col. NEWCOMER. But the immediate need, of course, for something there is to get some additional space for handling vessels. They need that very much.

Mr. FREAR. Perhaps I had in mind the item of \$380,000 for the Savannah River below, at, and above Augusta. What is that for? Is not that for the building of retaining walls along the side of the river?

Col. NEWCOMER. No, sir; the maintenance item of \$380,000 is made up, if I recall correctly, of \$350,000 for the harbor at Savannah and \$30,000 for the river between Savannah and Augusta. I suppose you are referring to the revetment at Augusta. That has already been provided for, and there is nothing in this bill for that.

The CHAIRMAN. If there are no further questions, we will take up the next item:

Sapelo and Darien Harbors, Cowhead and Satilla Rivers, Club, Plantation, and Fancy Bluff Creeks, Georgia, and Saint Marys River, Georgia and Florida: For maintenance, \$12,500.

If there are no questions on that item, we will take up the next one:

Brunswick Harbor Georgia: For maintenance, \$33,250.

Colonel, just for the information of the committee, why did you not report the item for the new project at Brunswick?

Col. NEWCOMER. We did not deem that of especial urgency at this time, although it is a very desirable work, in order to permit boats to go out on single tide and give them somewhat greater draft also. They have now a project there of 23 feet at low water, which gives them practically 30 feet at high water.

Mr. KENNEDY. What does the commerce there consist of roughly?

Col. NEWCOMER. It consists of cotton and naval stores. I think probably cotton is the most valuable item of commerce.

The CHAIRMAN. And also lumber?

Col. NEWCOMER. Lumber in large quantities also. It is quite an important harbor. It is one of the outlets of the Southern Railway.

Mr. DUPRÉ. I have been given to understand that there are large possibilities there and that Brunswick Harbor is one of the very desirable harbors on the South Atlantic.

Col. NEWCOMER. It affords an opportunity for extending the facilities there at a moderate cost; that is, up to a 30-foot depth the expense probably would not be great.

The CHAIRMAN. If there are no further questions, we will take up the next item:

Altamaha, Oconee, and Ocmulgee Rivers, Georgia: Continuing improvement and for maintenance, \$40,000.

Mr. TREADWAY. What is to be the nature of this improvement?

Col. NEWCOMER. This is a case where we formerly had a project to get a depth of 4 feet on these rivers. As a matter of fact, we found it was hardly practicable to get that at a reasonable expense, as compared with the commerce upon the river, and upon the recommendation of the department Congress adopted a project for an

annual expenditure of \$40,000, thinking that was a reasonable provision, or all that could be afforded for the commerce on the stream, and we have accomplished what we could with that amount toward ameliorating the conditions, and they are gradually increasing the depth and improving the shoals with that fund. It affords an opportunity not only to maintain and to do the necessary snagging and clearing of shoals that are formed, but it provides also a small amount which can be applied to additional improvement toward securing the 4 foot depth.

Mr. TREADWAY. Then this annual amount is a sort of arbitrary amount which was arrived at irrespective of the needs of the country when the appropriation happened to be made?

Col. NEWCOMER. We could expend, of course, much more than this and still not complete the 4-foot project.

Mr. TREADWAY. Yes; I can conceive of that; a great deal more.

Col. NEWCOMER. As a matter of fact, the district officer and the division engineer at that time, later Chief of Engineers, Gen. Kingman, as I recall it, recommended an expenditure of \$60,000, with the idea that that would give a 4-foot channel in a certain term of years.

Mr. TREADWAY. How long has this \$40,000 been carried?

Col. NEWCOMER. It is my impression that has run for four or five years. I am not sure when that was adopted, although I could find out from the annual report, of course. Congress thought that \$60,000 was greater than would be justified. The existing arrangement was adopted in 1912, and provides for an appropriation of \$40,000 a year.

Mr. SWITZER. I think we increased the amount once or twice.

Col. NEWCOMER. I do not recall that you have increased the amount since this new project was adopted.

Mr. TREADWAY. As a matter of fact, the commerce has been negligible, has it not?

Col. NEWCOMER. The commerce on the Altamaha has been in the neighborhood of 100,000 tons. In 1915 it was only 76,000, and the year before that it was 103,000. On the Oconee the commerce was about 42,000 in 1915.

Mr. TREADWAY. That includes rafted logs.

Col. NEWCOMER. The amounts are stated here. It does include that; yes.

Mr. TREADWAY. And, as a matter of fact, there is but one boat in operation.

Col. NEWCOMER. There is only one regular transportation line in operation between Macon—

Mr. TREADWAY (interposing). And they had to go to Europe or some other place to secure an engine which did not weight the boat down so that it could not go on the dew. I think that appears in our hearing.

Mr. FREAR. We have spent over \$1,000,000 on that project, have we not, Colonel?

Col. NEWCOMER. The amount expended on all the projects is \$809,000.

Mr. FREAR. That is the amount expended on new work, and the amount spent on maintenance is about \$200,000, which makes it a little over \$1,000,000.

Col. NEWCOMER. Yes; that is right. About \$1,000,000 for new work and maintenance.

Mr. TREADWAY. And, of course, this comes within the general rule of an emergency for national defense?

Col. NEWCOMER. This was classed in the general rule of maintenance rather than emergency. In other words, we proceeded on the policy that the existing facilities for navigation should be maintained. Most of this \$40,000 is, of course, required for the maintenance of the 3-foot depth. It does supply a little additional each year for continuing the improvement toward the 4-foot depth.

Mr. TREADWAY. Let me go back a moment, because that answer rather changes my idea of the method under which this bill is being framed. Any items of improvement you considered with reference to the emergency for national defense, and items for maintenance are to retain the upkeep of the present works; is that correct? I am asking a general question with reference to the basis of the bill, if I may.

Col. NEWCOMER. That is substantially the case. Of course you include in the term "national defense" any urgent commercial necessity which affects the national welfare as an element of national preparedness.

Mr. TREADWAY. Anything which affects the resources of the country; I suppose that would be true.

Col. NEWCOMER. Yes.

Mr. KENNEDY. Let me ask you a question, Colonel. As a general proposition, is not the channel as maintained now in various streams of the country sufficient to accommodate the commerce offered and the boats which are in commission on those streams?

Col. NEWCOMER. No; I would not think so.

Mr. KENNEDY. On what streams, if any, does that condition not obtain?

Col. NEWCOMER. Well, there are a great many streams—the Ohio, for instance, the Missouri, and the upper Mississippi. They are not adequate even for the existing commerce. In other words, existing commerce has trouble, and they can not accommodate the commerce that they would accommodate with improved conditions.

Mr. KENNEDY. Let me call your attention to what I called to the attention of Gen. Black when he was before us last winter in regard to the upper Mississippi. I am more familiar with that than the others. I take it that the appropriation which is made to prosecute the 6-foot channel on the upper Mississippi is expended largely on contracts; in fact, that is what I am told out there, and that the work of keeping a navigable channel open is done by the department plant. As a matter of fact, the Government plant for the past three years on the Mississippi River has not been in operation to exceed four months in the year. They have neglected, in other words, the ordinary work of keeping a navigable channel open at points where they are not working on the permanent 6-foot channel, and that has been the trouble out there.

Col. NEWCOMER. I think you will find, Mr. Kennedy, that that statement of the facts is disputed by some, as to the extent the Government plant has been used and as to the difficulties which have been experienced. There has been a good deal of controversy over that point.

Mr. KENNEDY. As a matter of fact, I remember that before the 6-foot channel was adopted the Government plant would start out in the spring under a lump-sum appropriation to keep open a navigable channel. They stayed out until the 15th of November, when navigation closed. It occurs to me the trouble out there has been with the maintenance proposition, because the money has been largely expended on contracts looking to the completion of the 6-foot channel.

Col. NEWCOMER. I think you will find the records will show there has been considerable money spent for maintenance; also in the operation of the Government plant.

Mr. KENNEDY. The records will also show that a large part of the Government plant laid at the bank and has laid at the bank for the past three years on the upper Mississippi.

Col. NEWCOMER. You, of course, do not mean continuously?

Mr. KENNEDY. I mean that the crews and the men which the Government employs have not gone out for the last three years until after the 1st of July. I understand that that is partly due to the fact that Congress has not passed the appropriation bill earlier in the session, but it is also due to the fact that whoever has charge of the distribution of the funds out there has let contracts for the work on the permanent 6-foot channel with the result that they have not had money enough to keep the Government plant keeping the channel clear in operation. It was called particularly to my attention by the fact that several engineers on Government fleets, three in my little town, quit and said, "We can not wait around nine months to get three months' work a year."

Col. NEWCOMER. Of course, you understand that most of the work of maintenance is done in a very limited time. For instance, take the dredges for the 9-foot channel on the lower Mississippi. I suppose, as a matter of fact, they do not average more than three months in the year, if they average that much. This maintenance work is required during the low-water season only. In other words, during the greater part of the year you have a channel, due to the stage of the water, which does not require dredging. As you approach the low-water stage, of course, the plant ought to get out and take care of the shoaling bars, etc., so as to get as much draft as you can during the low-water season.

Mr. KENNEDY. Now, as a matter of fact, could you not with a maintenance fund of, say, \$250,000, with a Government fleet, keep a navigable channel next summer in the upper Mississippi River?

Col. NEWCOMER. A navigable channel of what depth?

Mr. KENNEDY. The depth you contemplate for commerce on that stream.

Col. NEWCOMER. I should say not. I do not think it is possible to get, within a considerable limit of expenditure, a channel which is sufficient to accommodate them at all stages. Of course, the boats can load lighter and put on half loads and things like that, and, of course, they can proceed under such conditions. I do not mean to say that navigation would be blocked.

Mr. KENNEDY. As a matter of fact, there is no through navigation on the upper Mississippi which requires deep-draft boats. There is just one line between St. Louis and St. Paul, which operates about

four months in the year during the heated season, and that is a passenger proposition pure and simple; and, as a matter of fact, before the 6-foot channel was adopted a navigable channel was kept at a nominal expense—a lump-sum appropriation, to keep the channel open. At that time there were 25 times as many boats on the river as there are at the present time.

Col. NEWCOMER. Of course, at that time they had a project of 4½ feet. It was unfortunately the case, and we can not blink at the fact, that there is not any commerce on the upper Mississippi or on the Missouri or on the Ohio which justifies the expenditures that are being made there. There is no question about that. The only thing that can justify the expenditure will be the development of commerce after the improvement is provided. It is like a railroad, which you say can not carry commerce because it has not the facilities for carrying it. It is true there has been greater commerce on those streams in the past than at the present time. That commerce has largely been diverted to railroads, because the railroads afforded them better facilities.

Mr. KENNEDY. The fact is that commerce is falling off, and part of this line is being converted into pure excursion boats. The only line they had with a little local traffic, instead of making daily round trips is making a round trip each two days. It seems to me that in a bill of this character the 6-foot channel proposition on the Mississippi River might well be suspended for the present and a sufficient sum provided to keep an open channel. Now, do not think I am prejudiced against this proposition, because 60 per cent of the people I represent live in counties bordering on this stream.

Col. NEWCOMER. That is a matter we would regard as being a matter more for the discretion of Congress. We understand that Congress has embarked upon this proposition, which involves a very large expenditure, and very large sums have already been expended on it. To stop short of the goal, you certainly do not promote any development of traffic there, and you discourage any efforts which are being made now by the different cities along the river to build up their terminals and get better facilities. As I say, it is a question of discretion. We thought it ought to be included, because so much had been expended, and it is so important to keep alive any possibility of commerce there that we included it.

Mr. KENNEDY. It occurred to me that this is typical of other streams and at this time, when we are taxing the people to the greatest extent ever known in the history of the country, we ought to cut out the things that can be cut out at this time.

Col. NEWCOMER. You will notice that we have on most of the streams cut out the improvement and limited it to maintenance, and we feel that those propositions ought to go to Congress for its determination.

The CHAIRMAN. Before we leave this item for the Altamaha, Oconee, and Ocmulgee Rivers, I will say that I have added up the commerce for the calendar year 1915, and I find that they had a commerce of 152,333 tons, with a valuation of \$2,378,852.

Mr. FREAR. May I inquire if that does not include logs and cross-ties?

The CHAIRMAN. I did not look up the items.

Mr. FREAR. My recollection is that those three streams averaged about 4,000 tons of commerce outside of the timber which is carried.

The CHAIRMAN. The reports are available to any member of the committee, and you will find it in detail in either the second or third volume.

If there is no objection, we will proceed with the next item.

Indian River, Saint Lucie Inlet, Miami Harbor (Biscayne Bay), and harbor at Key West, Florida: For maintenance, \$8,000; completing improvement of Miami Harbor, \$180,000: *Provided*, That the work proposed under the project adopted by the river and harbor act approved July twenty-fifth, nineteen hundred and twelve, may be done by contract if reasonable prices can be obtained; in all, \$188,000.

Col. NEWCOMER. Mr. Chairman, inasmuch as the point has been raised as to the amounts carried by boats and rafts, I happen to have the second volume before me, and that indicates—

The CHAIRMAN (interposing). You are referring now to the item for the Altamaha, Oconee, and Ocmulgee Rivers?

Col. NEWCOMER. Yes. On the Altamaha the total by boats was 8,770 tons, by rafts and lighters 67,993 tons. On the Oconee the total by steamboats was 19,906 tons, and the amount of lumber rafted was 22,019 tons. On the Ocmulgee the total by steamboat was 19,886 tons, and by raft and lighters about 13,700 tons, so there was quite a considerable proportion carried by boats.

Mr. FREAR. Of that which was carried by boats on the Altamaha 2,014 tons consisted of crossties, hardwood blocks 1,000 tons, and, of course, that takes out nearly one-half the commerce on the Altamaha. On the Oconee there was 13,725 tons of oak blocks, which brings it down practically to the figures I gave. This is found on page 2281 of the report.

Col. NEWCOMER. But it was not rafted.

Mr. FREAR. No; but it might have been carried by barges or anything like that.

Col. NEWCOMER. It is the work we are doing which makes it possible to move the barges, of course. The rafting is done mainly on the tides or freshets, and, of course, to a certain extent, the movement of boats is done in the same way, but we need the improvement mainly for the movement of boats.

Mr. FREAR. There is nothing here to indicate how it was carried. There were two steamboats operated on the Oconee River during the year 1915, neither of which ran on a regular schedule. One boat made 110 trips. It does not state the size of the boats. Colonel, would any of the commerce here be duplicated by reason of the comparative location of the streams?

Col. NEWCOMER. I think not, but I do not know. The records should show.

Mr. BOOHER. May I ask whether crossties are not an important part of commerce?

Col. NEWCOMER. Yes, sir; it is important to the people who handle them.

Mr. BOOHER. And it is considered important for that?

Col. NEWCOMER. Yes, sir; very important; and crossties now, on account of the value of them, are shipped much more by barge than by rafting, as formerly.

The CHAIRMAN. The next item is—

Indian River, Saint Lucie Inlet, Miami Harbor (Biscayne Bay), and harbor at Key West, Florida; for maintenance, \$6,000; completing improvement of Miami Harbor, \$160,000: *Provided*, That the work proposed under the project adopted by the river and harbor act approved July 25, 1912, may be done by contract if reasonable prices can be obtained; in all, \$166,000.

Mr. FREAR. It was thought necessary and desirable to put that in this bill, I see, Colonel.

Col. NEWCOMER. Yes, sir. At Miami the locality has cooperated to a great extent by building terminals, and there has been a fulfillment of the conditions imposed. We consider it very desirable to afford accommodations on that part of the coast of Florida. As you know, it is a very long coast without any commercial facilities, and it is very desirable to give them.

(Thereupon, at 12 o'clock noon the committee took a recess until 2 o'clock p. m.)

AFTER RECESS.

The committee met, pursuant to the taking of a recess, at 2 o'clock p. m.

The CHAIRMAN. Gentlemen, we will proceed with the next item:

Tampa and Hillsboro Bays, Saint Petersburg Harbor, Hillsboro and Manatee Rivers, Florida: For maintenance, \$66,500; for improvement of Hillsboro Bay in accordance with the report submitted in House Document Numbered Thirteen hundred and forty-five, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$300,000; in all, \$366,500: *Provided*, That nothing in this act, nor in the act approved June twenty-fifth, nineteen hundred and ten, entitled "An act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes," shall be so construed as to prevent the use of any part of the Ybor Estuary zone for industrial or other legitimate purposes when the same is not needed for commercial uses, nor to exclude the building and operation of a railroad or railroads by private parties or railroad companies under such rules and regulations as the Secretary of War may prescribe, subject to the right of the city of Tampa to construct and operate a municipal railroad on said estuary zone as set forth in said report. The Secretary of War is hereby authorized to prosecute the work of improvement on the existing project for Saint Petersburg Harbor, in accordance with the modified conditions recommended by the Chief of Engineers and the Board of Engineers for Rivers and Harbors in the report printed in Rivers and Harbors Committee Document Numbered Six, Sixty-fourth Congress, second session.

Colonel, will you kindly explain this item to the committee and the necessity for it?

Col. NEWCOMER. The first important item, of course, is for the further improvement of Hillsboro Bay, the harbor of Tampa. We considered that there was a special importance in this case, due to the fact that practically all of the phosphate rock of Florida which is used as fertilizer comes from this port, and they are very much hampered now by the fact that these ships can not go out carrying full loads. They have a 24-foot project, and it is proposed to give them a 27-foot project. They asked for a 30-foot project, but after considering the matter, the department recommended it be increased to 27 feet, and it is proposed to give them 27 feet, which is the same as the Mobile Harbor has for about the same tonnage of commerce. The fertilizer element is what we might call the especially urgent feature at this time.

Mr. HULBERT. Is there a naval station there?

Col. NEWCOMER. No, sir.

Mr. SWITZER. I think that practically all the phosphate rock comes from there, except some from Tennessee, I believe.

The CLERK. Eighty-seven per cent of the phosphate in the United States is produced in that district.

Mr. SWITZER. That is my recollection.

Mr. DIES. Does that embrace the Tennessee field?

The CLERK. No, sir.

Mr. DIES. There is more produced, then, in Florida than in Tennessee?

The CLERK. Yes, sir; 87 per cent of the entire production of the United States.

Mr. BOOHER. I think this item includes the items found on page 20 of the original bill down to Apalachicola Bay on page 21.

Col. NEWCOMER. Yes, sir; I think that is right. It includes some other improvements that are not on that page simply on account of the grouping.

The CHAIRMAN. They are maintenance items?

Col. NEWCOMER. Yes; that is all. The significance of the second item authorizing the work in St. Petersburg Harbor to be carried on in accordance with the later recommendation is on account of the fact that the situation there is changed. The original plan for the improvement of St. Petersburg Harbor provided for an entrance channel to be constructed by the Government and an inner basin to be constructed by the locality. They found, after beginning that work, that they wanted to modify quite radically their plans for the inner basin, on account of getting ultimately a better terminal proposition.

Mr. BOOHER. Col. Newcomer, you left out of this bill, of course, the Senate amendment?

Col. NEWCOMER. Yes; for Sarasota Bay.

Mr. DUPRÉ. And also eliminated the continuing contract which the House inserted?

Col. NEWCOMER. Yes, sir; on the proposition that this bill would not carry any continuing-contract authorizations.

The CHAIRMAN. If there are no further questions, we will proceed with the next item:

Saint Johns River, Florida, Jacksonville to the ocean, opposite the city of Jacksonville, Jacksonville to Palatka, and Palatka to Lake Harney, Lake Crescent and Dunns Creek, Deep Creek, and Oklawaha River, Florida: For maintenance, \$335,000.

Mr. HULBERT. Is all that amount absolutely urgent, Colonel?

Col. NEWCOMER. The greater part of that is required for the jetties at the mouth of the St. Johns River, and it is urgent to repair them. The maintenance of that channel depends upon the integrity of the jetties, and they have gone down a good deal at the outer ends, and also one of the shore connections is considerably lowered.

Mr. HULBERT. Could not that be cut now, in view of this emergency?

Col. NEWCOMER. We have not made any effort to cut any of these propositions for maintenance, because they were gone into very carefully before and we considered them a reasonable allowance for the purposes.

The CHAIRMAN. If there are no further questions, we will proceed with the next item:

Kissimmee, Caloosahatchee, Orange, Anclote, Crystal, Withlacoochee, and Suwannee Rivers, Charlotte Harbor, Sarasota Bay, and Clearwater Harbor and Boca Ceiga Bay, Florida: For maintenance, \$11,000.

Colonel, is there any statement you desire to make with reference to this item?

Col. NEWCOMER. I do not think there is anything of special note there, unless some Member desires to ask some question about it.

The CHAIRMAN. It is maintenance?

Col. NEWCOMER. It is all maintenance.

The CHAIRMAN. And necessary?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is:

Removing the water hyacinth, Florida: For the removal of the water hyacinth from the navigable waters in the State of Florida, in so far as it is or may become an obstruction to navigation, \$10,000.

Mr. BOOHER. Colonel, I want to ask a question about the water hyacinth. We have a water weed in my country which is called the water lily. Is this the same thing as the water lily?

Col. NEWCOMER. I do not think it is the same thing as the water lily.

Mr. BOOHER. The water lily, you know, Colonel, grows up with big wide leaves, and then a stem runs up and has a big yellow bloom on it, and it is a very pretty flower.

Col. NEWCOMER. I know the flower, but I think this is a different proposition. I have never been in the South to see this water hyacinth. We have it not only in Florida but in Louisiana.

Mr. TAYLOR. Is it not just the ordinary water lily?

Col. NEWCOMER. I do not think so.

Mr. TAYLOR. Does it grow from seed?

The CLERK. It propagates from the roots, as I understand. In the spring floating masses form which it spreads rapidly. It can be propagated from the seed.

Col. NEWCOMER. I know it spreads very rapidly and grows in such large quantities as to block boats.

The CHAIRMAN. I would suggest that if the members of the committee want any information about the water hyacinth Mr. Dupré, of Louisiana, can probably tell them all about it.

Mr. DUPRÉ. I know it is a great evil in our part of the country. As I understand, it is an entirely different sort of plant from the water lily. It propagates very much more rapidly, and it herds together, so to speak, until it really bridges a stream, and it is necessary from time to time, in order that these streams be kept navigable, that the dredgers, which this appropriation contemplates the use of, should be sent up there to clear the thing out. It was thought at one time that the application of certain chemical processes would be helpful, but that has not proved a success, and its removal is dependent practically on the use of dredges. I know that because I have it in my own district and there is continual demand on me to have a dredge sent there to clean it out.

Mr. BOOHER. They obstruct navigation, do they?

Mr. DUPRÉ. You can almost walk across the thing. The roots get down so deep in the water and they are so closely connected that you can not see the water at all.

The CHAIRMAN. Gentlemen, we will proceed with the next item:

Carabelle Bar and Harbor, Apalachicola, Saint Joseph, and Saint Andrews Bays, Apalachicola and Chipola Rivers, and channel from Apalachicola River to Saint Andrews Bay, Florida; Flint River, Georgia, and Chattahoochee River, Georgia and Alabama: For maintenance, \$77,500; continuing improvement of Apalachicola River, including the cut-off, Lee Slough, lower Chipola River, and upper Chipola River from Marianna to its mouth, \$18,000; in all, \$95,500.

Mr. HULBERT. Colonel, what is the immediate urgency of continuing the improvement of the Apalachicola River at this time?

Col. NEWCOMER. The Apalachicola River, you know, is the outlet of the Flint and the Chattahoochee and there is quite a little commerce there, not only to Apalachicola Bay but by means of a connecting canal to St. Andrews Bay, and there is one bar at Blountstown on the Apalachicola River which has been giving a great deal of trouble and that is where the improvement money is proposed to be spent.

Mr. HULBERT. What is its relation to the exigency we are limited to in making up this bill, which I understand, so far as continuing projects is concerned, is dependent upon the question of national defense?

Col. NEWCOMER. The amount that is involved here for continuing improvement is quite small, and the obstruction there is very important as affecting all that commerce. I think it is a very wise expenditure of money to make. It is a commercial proposition. I do not know that in this case there is any special military feature involved. Of course there are naval stores which come from all these streams to a greater or less extent. I do not know that they are specially involved there. It is simply an outlet for the commerce of this region, which has very poor rail facilities.

The CHAIRMAN. Colonel, you regard all these items of maintenance as urgent and necessary?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. We will take up the next item:

Holmes and Blackwater Rivers, Florida, Choctawhatchee, Escambia, and Conecuh Rivers, Florida and Alabama, the narrows in Santa Rosa Sound, and Pensacola Harbor, Florida: For maintenance, \$9,500.

Col. NEWCOMER. There is no special note about that.

Mr. HULBERT. It is all urgent?

Col. NEWCOMER. It is required for maintenance.

Mr. HULBERT. Will any part of this money be spent on the Holmes River?

Col. NEWCOMER. About \$1,000, as I recall it, at the mouth of the Holmes River.

Mr. HULBERT. Is there any commerce on the Holmes River now?

Col. NEWCOMER. Oh, yes. The project provides for working up the Holmes River for a considerable distance, but we have suspended work except at the mouth, because that is the most important point, and we are limiting the work to that point. There is quite a large amount of products and naval stores which come out of this country.

The CHAIRMAN. The next item is:

Mobile Harbor and bar, and channel connecting Mobile Bay and Mississippi Sound, Alabama. For maintenance, \$115,000.

Mr. GRAY. Colonel, I would like to ask you several questions. I will first ask this question for information: How many new or continuing contract propositions are proposed in this bill? Have you that information at hand? Of course, I could look over the bill and ascertain, but I thought probably you had the information at hand.

Col. NEWCOMER. It is my impression, Mr. Gray, that there were 81 new projects originally carried in the bill as it went to the Senate from the Senate committee, and I think there are 27 included in this bill.

Mr. GRAY. Twenty-seven new projects?

Col. NEWCOMER. Yes; practically one-third of them are retained. That is the statement made to me. I have not verified it myself.

Mr. GRAY. Of those that you have brought in in this tentative bill, which ones do you consider the real emergency propositions of the 27?

Col. NEWCOMER. I have indicated, of course, in a number of instances the particular feature in each case as we came to it. I think in every case so far I have indicated the feature that appealed to us as having special urgency. For instance, Tampa Bay Harbor, where they have only 24 feet draft, carry a heavy tonnage; the tonnage in that case being fertilizer, which is a matter of special importance.

Mr. GRAY. I am simply asking this as a matter of comparison. You really consider that all the projects you recommend in this bill are emergency propositions?

Col. NEWCOMER. Yes, sir.

Mr. GRAY. It is a fact, is it not, that the Government has spent millions of dollars on the Tombigbee River and its tributaries which extend into the mineral district of Alabama?

Col. NEWCOMER. Yes, sir.

Mr. GRAY. What do you consider the real purpose of this great expenditure of money?

Col. NEWCOMER. To get the coal out.

Mr. GRAY. What was the real purpose of this great expenditure of money?

Col. NEWCOMER. The proposition, as I have always understood it, has been to give access to the coal fields. They have there very extensive coal fields, and the important proposition involved was to give access to them from the seaboard.

Mr. GRAY. And for armor plate and other things that go into the building of vessels?

Col. NEWCOMER. If they chose to ship it that way; but I question whether it would be done.

Mr. GRAY. Why?

Col. NEWCOMER. For the simple reason that we do not, as a matter of fact, find in practice that traffic of that kind will go by rail and then be transferred to boats to be carried a few hundred miles and be transferred again. In other words, if it could go through, or if you had a canal connecting the Birmingham district with the Black Warrior system, then it is possible that it might be cheaper by water. Of course, I do not mean to say that it is not possible to do it that

way, but we have not been expecting to see shipments of these heavy things by water unless there is water at the point of origin.

Mr. GRAY. Leaving out the river proposition, would not the failure of the Government to provide a sufficient depth of water in the channel prevent dead-weight cargoes from being handled economically and effectively from the Birmingham district through the harbor and out into the open sea?

Col. NEWCOMER. That is very true.

Mr. GRAY. Well, it is necessary to export this stuff, is it not?

Col. NEWCOMER. Yes, sir; it will probably go out, or a good deal of it.

Mr. GRAY. Some of it will be exported.

Col. NEWCOMER. It was expected that coal from Alabama would go out not only through the Mobile Harbor but also through Pensacola and New Orleans. Those were the three points that were considered to be the principal points. Of course it can go through those ports now. I suppose you are referring to the Mobile project.

Mr. GRAY. Yes.

Col. NEWCOMER. The Mobile project has recently been extended from 23 feet to 27 feet. It was only a year ago, or, possibly, a year and a half ago that they secured the 27-foot project, and there is now a favorable recommendation before Congress for a 30-foot project there. That item was included in the last river and harbor bill, and we considered it an important matter. However, we have found that there is some question as to whether the 30-foot project should be taken up at this time, so near to the time when the 27-foot project was provided, and without having had much experience to show to what extent they would utilize that. It has been only within the last two or three years that they could go in there with boats drawing more than 23 or 24 feet. Now, to what extent they are utilizing that 27-foot channel I do not know, and, of course, the present circumstances are not favorable to the development of that situation.

Mr. GRAY. Some of those new projects that you put in the bill can not be completed under four years? It will take four years to complete them, will it not?

Col. NEWCOMER. It probably will.

Mr. GRAY. Then, how would you meet the immediate needs on those projects? I simply suggest that as a matter of comparison, and I am not trying to take away any of those appropriations.

Col. NEWCOMER. Of course, the full benefit would not be obtained until the projects are completed, probably; but we may be able to get certain facilities before that time.

Mr. GRAY. In making preparations for war, what material would you think that the Government was most in need of for building boats—both warcraft and commercial transports? That, of course, is a practical question.

Col. NEWCOMER. Just at present, of course, they are proposing to utilize lumber most extensively. They are proposing to build wooden ships.

Mr. GRAY. And they would have to have a good deal of iron and steel, would they not?

Col. NEWCOMER. Undoubtedly they would like to have steel ships also, and they would want to build them as rapidly as possible.

Mr. GRAY. Don't you think that iron and steel, and especially lumber, can be handled more cheaply by water than by rail? Really, is not that the fact?

Col. NEWCOMER. Under comparable conditions; yes, sir; if the water is accessible.

Mr. GRAY. If not, we ought to abandon the improvement of these waterways.

Col. NEWCOMER. If the tonnage is accessible to the water, that is true.

Mr. GRAY. They are absolutely taking those products out of the sides of the banks and are throwing them on barges at some places above Tuscaloosa. I am referring to coal.

Col. NEWCOMER. Yes, sir.

Mr. GRAY. And that is necessary, is it not?

Col. NEWCOMER. Yes, sir.

Mr. GRAY. You spoke of the manufacturing plants—what about lumber products in vast quantities, both oak and pine, along this river?

Col. NEWCOMER. They are extremely important. Of course, there is a great deal of lumber coming out of Mobile, also out of Gulfport and Pascagoula.

Mr. GRAY. What about the immense cement beds there in the Demopolis section? Would not cement be used very extensively?

Col. NEWCOMER. Of course, so far as they have made preparations to develop it. They have, as I understand it, one plant there; but I do not know how extensively they manufacture cement. There are undoubtedly great resources there, but they are mostly undeveloped.

Mr. GRAY. If those things could be furnished cheaply and expeditiously by this means, it would not be unwise to continue this improvement, would it? Would not that be considered an emergency, if we needed those things? Would not that be considered as an emergency proposition?

Col. NEWCOMER. Of course; but whether there would be any necessity of giving an additional 3 feet of depth at Mobile or increasing the depth from 27 to 30 feet is another question. As I understand it, that is the proposition you have in mind. Of course a depth of 27 feet carries a very good tonnage. Most of the tramp steamers, or a great many of them, can carry a full cargo on that depth. It is better, of course, to have 30 feet, because 30 feet would take nearly all of the steamers. Some steamers will draw more than that, but I suppose that 95 per cent of the tonnage in New York Harbor comes in on 30 feet draft or less. Of course, here you have a harbor where you can meet things fairly well with your 27-foot project. I do not, of course, question the immediate desirability of having 30 feet.

Mr. GRAY. As a matter of fact, is not this river system considered to be the second in importance in this country? It is second, probably, to the Mississippi River and its tributaries.

Col. NEWCOMER. I question that. I do not want to depreciate the importance of this system.

Mr. BOOHER. Is it your intention, then, to advise the abandonment of the 30-foot project?

Col. NEWCOMER. No, sir; I would like to see that in the bill, as well as these other things that have been eliminated from the bill.

Mr. HULBERT. Is this 27 feet depth in the bay, or does it extend some distance up the river?

Mr. GRAY. It is through the channel.

Col. NEWCOMER. It extends up the river a short distance.

Mr. HULBERT. How far?

Col. NEWCOMER. A few thousand feet along the harbor front.

Mr. HULBERT. Then you have a greater project depth there than in the East River.

Col. NEWCOMER. There would be. I think the present project depth in East River is 26 feet.

Mr. HULBERT. It is 26 feet, and that is only about 65 per cent complete.

Col. NEWCOMER. We propose a project depth of 35 feet in the bill.

Mr. HULBERT. But you limit that to two points. I was in sympathy with the suggestion made by Mr. Gray, because unfortunately there are certain ports along the Atlantic and Gulf that have not been improved proportionately with other ports.

Mr. SWITZER. Which do you consider the most important?

Mr. HULBERT. Considering the fact that the State of New York has had to build the \$160,000,000 State barge canal at its own expense, I think it is more important. That links up the Great Lakes with the Hudson River.

Mr. GRAY. Col. Newcomer, when this bill was prepared, it was felt that, in view of the fact that Mobile could not be finished up as a new project for quite a number of years, the present accommodations would answer every reasonable purpose other than for the exportation of coal.

Col. NEWCOMER. I do not think that we considered particularly the clause that you have interjected there about the length of time required to complete Mobile. It was simply a question of whether it was urgently necessary to take it up at this time. I do not think that it would take any longer in the case of Mobile than it would take in the case of Tampa to complete the project. That was not the deciding consideration at all. It was simply thought that a depth of 27 feet does make fairly adequate and reasonable provision for the commerce there.

Mr. GRAY. Is it not a fact that a great deal of fertilizer is coming from South America into the port of Mobile?

Col. NEWCOMER. I do not know about that.

Mr. GRAY. You are not informed as to that?

Col. NEWCOMER. No, sir.

Mr. GRAY. So that the question of time in making these improvements did not figure in it?

Col. NEWCOMER. No, sir; I did not say that. I said that in considering Mobile we did not throw it out because of the time involved. That was not the proposition there. I think we have abandoned any number of projects and recommended a number of projects where the time of completion is far in the future, but we hope to get results from them in the near future that will be of value. Take that case of the East River, for instance, where the project is one involving the expenditure of many millions of dollars. What we need now is to get a practicable channel through there as soon as we can.

Mr. HULBERT. But you are taking that up for military purposes?

Col. NEWCOMER. For both military and commercial purposes.

Mr. HULBERT. The commercial necessity in East River is around the dock approaches, and you are not making any provision for them at all.

Col. NEWCOMER. I do not think that they need it so much. There is a very large reef there covering a large portion of the eastern shore of Manhattan Island, which, of course, is cut off, but nobody ever proposes to establish deep-draft docks at that point. There are many places that are fairly accessible to the docks and wharves, and the people who build these wharves usually provide the channels in the vicinity.

The CHAIRMAN. Just in order to get the record complete, I will make this statement: I find that in Tampa Bay the commerce for the calendar year 1915 was, as Mr. Frear has stated, 1,829,540 tons, while the commerce of Hillsboro Bay was 1,251,027 tons for the same year.

Mr. HULBERT. If I may be permitted, Mr. Chairman, I would like to put in the record at this time the figures showing the tonnage in the East River for 1915. That tonnage was 74,178,177, having a value of \$4,192,206,408.

The CHAIRMAN. The next item is—

Alabama River, Alabama, and Coosa River, Alabama and Georgia: Continuing improvement and for maintenance, \$50,000.

Are there any questions on that item? If not, we will proceed to the next.

Tombigbee River, Alabama and Mississippi. For maintenance from mouth to Demopolis, Alabama, \$30,000, and from Demopolis, Alabama, to Walkers Bridge, Mississippi, \$10,000. In all, \$40,000.

Mr. FREAR. Are these the same amounts that were in the last time, Colonel?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. May I revert to the preceding item, Mr. Chairman, and ask what the particular urgency is for continuing the improvement included in the amount of \$50,000?

Col. NEWCOMER. The continuing improvement in that case applies more particularly to the building of wing dams and things of that kind, which, of course, afford a better maintenance of the channel. It is a work that, practically, you might say, is a maintenance proposition and involves the building of these additional works. And \$50,000 is considered about the minimum amount that will take care of that work for a year.

Mr. HULBERT. Is there any difference in the character of the necessity for opening up that ledge of rock in the Coosa River and taking out the rock at Macombs Dam Bridge in the Harlem River, so as to provide a uniform depth of 15 feet?

Col. NEWCOMER. I do not think substantially there is any difference. Of course you ought to have your full project depth.

Mr. HULBERT. Could not this as well be eliminated as the item of \$250,000 for a similar improvement in the Harlem River was eliminated?

Col. NEWCOMER. No, sir; I think not. The Macomb Dam work is now being taken up, as I understand, with funds on hand, so that

you can get an additional depth through. Of course this improvement, like the Alabama, Chattahoochee, Flint—all of those involve the open-channel improvement, which is a more or less difficult proposition in this way, that the low-water flow is usually inadequate to provide a really adequate channel depth, and the consequence is that in order to permit their navigation to the best effect we have to keep snag boats in operation there, do more or less dredging, and build wind dams so as to get the best result we can. It is a continuous proposition which is not very satisfactory but the commerce involved seems to be sufficient to justify caring for it in this way.

The CHAIRMAN. The next item:

Pascagoula Harbor, Mississippi: Continuing improvement and for maintenance of channels through Horn Island Pass, Mississippi Sound, Pascagoula River, and Dog River, \$113,000.

Mr. GRAY. Now, I do not want to object to that at all, understand, but what are the specific needs for the little harbor there in the Pascagoula River?

Col. NEWCOMER. That is a case where they have only a 17-foot project, and it is a lumber port. Seventeen feet, of course, is a rather inadequate depth for lumber shipment. They have to send out a great deal of their lumber to the Gulf; as a matter of fact, they have to load it on lighters in order to get it on the deeper-draft boats.

Mr. GRAY. As an emergency proposition, why is it any more an emergency than to get lumber through the port of Mobile? That is what I am speaking of. I know it is an advantage and I think we ought to have it; I am not kicking against that.

Col. NEWCOMER. Don't you see, it is a more difficult thing to get lumber out of a 17-foot port than it is out of a 27-foot port.

Mr. GRAY. I see that, of course.

Col. NEWCOMER. Lumber vessels draw usually anywhere from 20 to 25 feet; that is, the run of the seagoing lumber boats.

Mr. GRAY. Is that the principal industry there?

Col. NEWCOMER. Lumber is practically the only industry, as I understand it.

Mr. DUPRÉ. And naval stores.

Col. NEWCOMER. Yes; they have naval stores, as I understand.

Mr. FREAR. Is that for the one or two mills there near the entrance, or what is that for, Colonel?

Col. NEWCOMER. I do not know the number of mills involved in that case. That is the outlet, you know, of the Leaf, Chickasahay, and Pascagoula Rivers. It is quite a lumber territory, but I do not know how many mills there are down there at Pascagoula. I suppose there are several.

Mr. FREAR. Out of 102,000 tons, on page 2,400 of the report, 12,000 are slab; 75,000 are lumber and timber, in round numbers; 5,968 are crossties. That makes a little over 90,000 tons of timber products out of 102,000.

Col. NEWCOMER. It is practically all timber products.

Mr. FREAR. This item is putting \$113,000 in that harbor. What was put in last year, Colonel?

Col. NEWCOMER. I do not recall.

Mr. DUPRÉ. The same thing. I have both amounts here, and they are the same.

Mr. FREAR. I mean the last year, 1916.

Col. NEWCOMER. You mean the last appropriation. I will have to look that up. It is \$80,000.

Mr. FREAR. How much—\$80,000?

Col. NEWCOMER. \$80,000.

Mr. FREAR. Now, let me understand. In 1916 we appropriated \$80,000 for this 12,000 tons of commerce outside of wood products, and there is an additional 113,000 in this bill; and we have already appropriated \$1,413,000.

Col. NEWCOMER. No; but we did not spend it for the 12,000 tons outside of the timber products; we spent it for all of the tonnage of the port and the other products that are shipped in boats.

Mr. FREAR. What is the nature of the improvement; does it run up the river for a mile, or what?

Col. NEWCOMER. I beg pardon?

Mr. FREAR. Does that improvement run up a mile or so, or what is the character of it?

Col. NEWCOMER. It runs up into the Dog River on which the mills are situated; yes, sir.

Mr. FREAR. Have these people who are there paid anything toward these improvements?

Col. NEWCOMER. They have been required to do certain cooperative work—furnish terminals. There was originally a condition imposed, under which this project on which we are now working would require a contribution of a certain amount of money by them and also the construction of certain terminals. Congress subsequently withdrew the requirement for a contribution of an equal sum from them to that provided by the Government.

Mr. FREAR. That was stricken out by the Senate.

Col. NEWCOMER. But it still required the other condition about the terminals and provided that the amount that the Government was to spend should be applied to furnish such depth as it could. In other words, as I recall now, the total expenditure was in the neighborhood of \$300,000, or something like that. They were to provide half and we half; and then Congress released them from the condition of supplying that sum of money and authorized the expenditure of the Government's share to get as much of the project increased depth as they could.

Mr. FREAR. The engineers recommended this contribution, did they not, and then Congress took it out of the hands of the engineers, that is, the Senate did, as I now recollect; it struck that provision out.

Col. NEWCOMER. I do not recall all of the details of the transaction, but I do know this, that the matter was referred back to the Board of Engineers once or twice for consideration as to whether those conditions might not be waived. As to just what action was taken, whether the final action was taken by Congress without reference to the recommendations of the department, or not, I do not know; I think it was.

Mr. FREAR. May I ask why the engineers asked for that contribution, because this has a bearing on all cases of contribution?

Col. NEWCOMER. This appealed to us as did a number of other cases on the Pacific coast, for instance, where one industry is the principal industry affected and where, therefore, it is a simpler proposition, apparently, to get cooperation on a just basis where there is only one industry affected, because those people are usually few in number and we can get at them and insist on their contributing; so that at that time the department felt that was a desirable condition to impose. As I say, I do not recall all of the details now.

Mr. FREAR. That is as I understand the reports.

Col. NEWCOMER. Yes, sir.

Mr. DUPRÉ. May I ask you a question? Will you indicate to me what reason there is why a stream or a harbor, on which mainly lumber is transported, the lumber being export lumber, should not be developed as well as any other stream?

Mr. FREAR. As long as I am put on the stand as an expert—

Mr. DUPRÉ. I do not mean to be offensive, but that has been running through your mind apparently all day and I wanted to hear why you thought it should not be deepened.

Mr. FREAR. On the stream on which I live there has been more lumber shipped and logs shipped than on the Mississippi River according to the statements of the men who live there. That, of course, would be twenty times the amount that goes out of the Pascagoula Harbor, which is very small, comparatively. One hundred thousand dollars has been spent on that river in all that time, and the reason for that is, referring to the carrying of these lumber products, which, of course, are valuable, that they have been carried on the small boats and moved on lighters, as the colonel suggests is done here. Now, here is the record and, as I understand, I think the record shows that this Pascagoula River carries up to two or three mills and the Army engineers recommended that a contribution should be had, but it was stricken out (and we can all form our own judgment why) in one of the Houses, and now the Government is required to pay this difference which, out on the coast, is required and insisted upon to be contributed; that is, it is out on the Pacific coast. But in this case it has been abandoned and the engineers' recommendation overruled. That is as I understand it.

Mr. DUPRÉ. I did not have in mind the question of the abandonment of the local contribution feature, because that applies to this particular proposition; but all along the line of your remarks, it seems to me that has been underlying. Now, possibly, is not the reason why only \$100,000 has been spent on your stream is because you have a very good stream and did not need to spend more than that to develop it properly?

Mr. FREAR. Oh, no; it is because the timber is all carried down on the small boats. Now, just let me give you, right here on the following page, an illustration of what my meaning is: On page 2401, on the Chickasawha, the overhanging trees felled and cut up number 5,896 and the bushes and all the stumps and snags cut there reaching 18,203, different obstructions in just that one river for that small amount of timber and lumber carried into Pascagoula Harbor. I speak of that because it shows while this is all largely for the benefit of those two or three mills there and could be easily carried on small boats, an expenditure reaching \$1,400,000 has gone into that project,

and that they have been able to avoid the contribution which was urged by the engineers.

Mr. BOOHER. Can you give us the value of the lumber products that have gone out of that stream in all those years?

Mr. FREAR. No; I could not give you the value of that which has gone out of the Mississippi and St. Croix, but I think on the comparative basis of the shipments made in the last year, it was easily ten dollars to one; and here is \$113,000 estimated for this river for this one year.

Mr. BOOHER. Perhaps your river up there is not like the southern rivers, is not like this river; it does not wash and shoal. These southern rivers have sandy soils and they form bars and shoals, and they have to be taken out or we would not have any transportation at all.

Mr. FREAR. My thought in bringing this out was that the engineers were right in urging the contribution and that it ought to have been followed up, because it is a tremendous expense upon those local saw-mills there.

Mr. KETTNER. Col. Newcomer made the statement, if I understood him aright, that on the Pacific coast, where the benefit accrues mostly to a single individual—

Col. NEWCOMER. Industry; not individual.

Mr. KETTNER. Well, industry. Did you have in mind any in California?

Col. NEWCOMER. More particularly those lumber ports on the coasts of Oregon and Washington.

Mr. KETTNER. I know California always donates her share, and we have not a single port in California that I can recall where the benefit of river and harbor improvement would accrue to a single corporation.

The CHAIRMAN. The next item:

Gulfport Harbor, Miss.: Continuing improvement and for maintenance of anchorage basin at Gulfport and channel therefrom to the anchorage or roadstead at Ship Island and for the improvement and maintenance of channel at Ship Island Pass, \$80,000.

The next item is:

Pascagoula, Wolf, Jordan, Pearl, and East Pearl Rivers, and Biloxi Harbor, Miss.: For maintenance, \$10,000.

Next item:

Yazoo River and tributaries, Miss.: For maintenance, including Yazoo, Tallahatchie, Coldwater, and Big Sunflower Rivers, Tchula Lake, Steele, and Washington Bayous, Lake Washington, and Bear Creek, \$20,000.

Next item:

Passes at the mouth of the Mississippi River: Continuing improvement and for maintenance, \$1,825,000.

Mr. HULBERT. Which pass is that intended to cover?

Col. NEWCOMER. Mainly the Southwest Pass, and some of it goes to the South Pass also.

Mr. HULBERT. Do you know what proportion will be applied to Southwest Pass?

Col. NEWCOMER. Practically, I should say, over 90 per cent. As I recall, about \$150,000 is required in South Pass, and the rest goes to the Southwest Pass improvement—the 35-foot project.

Mr. FREAR. Is that amount large enough? I remember you made a recommendation for more.

Col. NEWCOMER. We did ask, as I remember, for a little over \$2,000,000, but it was concluded in the consideration of this bill before that this would probably answer for one year; and I think that was probably right. It is desirable to expedite that work there as much as possible, because the jetties at South Pass are becoming more liable to damage, and of course we want to get Southwest Pass developed as fast as we can, and we require these inner jetties and the bulkheads as soon as we can get them.

The CHAIRMAN. Southwest Pass is the newer pass?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Let me ask you: Why is it that such a large proportion of the number of vessels going in and out of the Mississippi River continue to use the South Pass?

Col. NEWCOMER. Because that has been the more reliable channel. While it is not as deep sometimes as the other, it is a more reliable channel, and, of course, the pilots are familiar with it. And the work done at the other pass—the jetties were placed too wide apart, and the channel depends on dredging to too great an extent, and the dredges have not been able to keep the pass clear.

Mr. HULBERT. Southwest Pass?

Col. NEWCOMER. Southwest Pass.

Mr. HULBERT. The South Pass accommodates about 90 per cent of the shipping, does it not?

Col. NEWCOMER. Actually I presume it does carry that much, because the other project has really not been provided as yet.

Mr. HULBERT. It is completed, is it not?

Col. NEWCOMER. Oh, no, sir.

Mr. HULBERT. It is substantially completed?

Col. NEWCOMER. No; that is just the point. They found they could not get it by the original plan.

Mr. FREAR. In that connection, Colonel: Will that South Pass ever be able to carry much commerce?

Col. NEWCOMER. The South Pass?

Mr. FREAR. Yes.

Col. NEWCOMER. Of course. South Pass now carries practically all the commerce.

Mr. FREAR. I understand, but the purpose is to enlarge the Southwest Pass.

Col. NEWCOMER. That is right; and it is expected, of course, when we get a 35-foot depth there, it is more than probable we can get along without the South Pass.

Mr. FREAR. The South Pass is not to be abandoned?

Col. NEWCOMER. Oh, no; I judge not. Of course we won't attempt, at any considerable expense, to maintain a 30-foot depth there when we will have 35 feet through the other pass, but we will have to maintain it until we get the other open. Whether any work will be justified later on I do not know.

Mr. FREAR. We have spent about equal amounts on both, haven't we?

Col. NEWCOMER. I really do not recall as to the relative expenditures. Of course South Pass was first improved at a considerable cost, and we have now taken up the other one, and we have spent, as I recall, something like eight or nine millions on it.

Mr. FREAR. The appropriations have run over ten millions.

Col. NEWCOMER. Over ten millions; yes.

The CHAIRMAN. The next item: Bayous Lafourche, Terrebonne, Grossetete, Plaquemine, and Teche, La.: For maintenance, including Grand River and Pigeon Bayous, \$64,000.

The next item: Waterway from the Mississippi River to the Sabine River, La.: For maintenance, \$7,000; for completing improvement from Mermentau River to Sabine River, Louisiana and Texas, in accordance with the report submitted in Senate Document No. 705, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$230,000; in all, \$237,000.

Mr. HULBERT. That is a new project, isn't it?

Col. NEWCOMER. It is a new project; yes, sir.

Mr. FREAR. Was that in the last bill?

Col. NEWCOMER. That was put in the bill in the Senate.

Mr. FREAR. But it was not in the last bill as it passed the House?

Col. NEWCOMER. No, sir.

Mr. FREAR. Do your engineers recommend that that should be improved?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Did you the last time before the House?

Col. NEWCOMER. The report had not been prepared at the time the bill was considered by the House. It was an investigation made just a few months ago. A situation developed there calling for an investigation and I think the Senate Committee on Commerce called for a reexamination of that project and that investigation was made and disclosed conditions which indicated the desirability of very early work there. We now have a project for a 5 by 40 foot waterway from the Mermentau to the Sabine River. The part of it from the Calcasieu to the Sabine has been built and they have now established some shipyards in there and they have also made arrangements for the shipment of sulphur. There are two sulphur deposits in the United States, one here in Louisiana and the other over in Texas, and the locality is so much impressed with the necessity of getting those products out that they have offered to contribute one-half of the cost of enlarging the waterway from the present size of 5 by 40 feet, which answers the purpose of the local tonnage; but they need for the greater tonnage a 9-foot depth.

Mr. FREAR. This is under the preparedness program?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. You mean this is urgent as a part of the general plan of preparedness—this 5-foot depth?

Col. NEWCOMER. No; the 9-foot depth.

Mr. HULBERT. They won't be able to accommodate any vessels of the Navy?

Col. NEWCOMER. No; but they could carry the sulphur out and also provide an outlet for the boats they are now building.

Mr. DUPRÉ. In addition to the local proposition which the localities undertook, the Union Sulphur Mining Co. has agreed to complete, at its own expense, its connecting waterway?

Col. NEWCOMER. Yes.

Mr. DUPRÉ. Requiring an expenditure of some \$250,000, which will enable the transportation of sulphur direct from the mine to Port Arthur.

Mr. DIES. Whereas it now goes by rail.

Mr. DUPRÉ. Yes; and has to be transshipped there.

Before we leave that, I note with sorrow the omission from this item the appropriation included in the last bill of \$100,000 for an inland waterway from the Mississippi to Teche. I am of the same mind on that as Mr. Gray was this morning in regard to Mobile, but I assume from what you said that these omissions are made without regard to the merits of the projects left out?

Col. NEWCOMER. We did not consider that of such urgency, although it is very desirable as to require an appropriation at this time.

The CHAIRMAN. The next item: Lake Pontchartrain, Pass Manchac, Bogue Falaya, Tchefuncta, Ponchatoula, Natalbany, Blood, Tickfaw, and Amite Rivers, and Bayou Manchac, La. For maintenance, \$4,000.

Col. NEWCOMER. In connection with this item of Lake Pontchartrain, where we only propose funds for maintenance, there was in the bill as prepared before an item for a further improvement of Lake Pontchartrain by giving an 8-foot outlet at its eastern part, out to Lake Borgne and Mississippi Sound. We left that out in compiling this bill because it had not been presented to us in a way which indicated any special urgency at this time. It was a proposition, I think, reported nearly four years ago, and we were not aware of any recent development indicating any special urgency. There was brought to our attention yesterday, however, the fact that there has been established already a shipyard there, which is building 1,500-ton boats and which is going to build 2,500-ton boats, which probably would not be able to get out—that is, the larger boats—unless this channel is provided. And there is another shipyard which is going to be built on Lake Pontchartrain for the building of these bigger boats if this work is provided. A telegram has been sent to the district officer to get information on that point, and as soon as we have it we will present the information to the committee.

Mr. FREAR. What is the fact there; it has only a very small depth, hasn't it?

Col. NEWCOMER. Most of the communicating waterways have a project depth of 7 feet, but of course the lake itself has something more than that.

Mr. DUPRÉ. It has an average depth of 15 feet.

Mr. FREAR. This new project was to give a depth of 15 feet?

Col. NEWCOMER. No, sir; only 8 feet at the outlet, where it connects with the Mississippi Sound.

Mr. FREAR. Would it be the duty of the Government, if the shipyards are built in inaccessible places, to then dredge up to those places, or wouldn't it be the duty of the shipyards to build at places which are already accessible?

Col. NEWCOMER. Of course, a proposition for that depth, I believe, was made before the shipyards were built, and they have been able to get these small 1,500-ton boats out. But as I understand they now propose to build these larger ships, and they need the deeper

channel. The proposition does not involve the expenditure of much money; I think there is only \$ 32,000 involved there for this channel. It was included in the bill, and I presume those parties located there expecting the channel to be dredged to that depth.

Mr. FREAR. I examined that at the time that project was recommended. Do you think that \$32,000 project will be sufficient to keep that channel open. It was put right across the lake, as I remember; not along the side—it is right in the center.

Col. NEWCOMER. Oh, no; it is not in the center at all; it is at the eastern end, at the outlet of the lake into the Mississippi Sound, between—

Mr. FREAR. And what is the length?

Col. NEWCOMER. I think it has a length of only a few thousand feet.

Mr. DUPRÉ. It is between 1 and 2 miles, where there was a depth varying from 3 to 6 feet.

Mr. FREAR. It seems to me it is like Albemarle Sound or any other place, that a wash will follow with a change of winds, because it has not a well-defined channel.

Col. NEWCOMER. Of course, there will be further expenditures for maintenance involved. It will require about 10 per cent of this amount per annum for maintenance—10 per cent of the estimated cost of \$32,000.

Mr. DUPRÉ. I will say this, that a favorable report had been submitted to Congress before those shipbuilding industries were located there, so that they went up there with the hope that Congress would subsequently do its duty.

Mr. FREAR. I remember it was in last year, and I will ask the reporter to strike out my remark about that.

The CHAIRMAN. The next item:

Bayous Vermillion, Nezpieque, des Cannes, Plaquemine Brule, and Queue de Tortue, Mermentau River, and Calcasieu River and Pass, Louisiana: For continuing improvement and for maintenance, including channel, bay, and passes of Bayou Vermillion, and tributaries of Mermentau River, \$51,000.

Mr. HULBERT. What is the continuing improvement provided for there, Colonel?

Col. NEWCOMER. That is the Bayou Vermilion. I think there is a question which came up when this bill was under consideration before as to whether certain work which ought to be done on the upper river had been done or whether it was maintenance. We had it in as maintenance, under the impression it had been done at one time and allowed to lapse on account of lack of need for it at the time, but now there are a great many sugar plantations and industries like that creating a need for it, and we put it in as maintenance. But to clear up that ambiguity as to whether this was new work or maintenance we have put in here "continuing work and maintenance."

Mr. HULBERT. Is it urgent now as a matter of commercial necessity or naval necessity?

Col. NEWCOMER. It is a commercial necessity—to take care of the commerce of this region.

Mr. FREAR. That is an increase over the amount provided for last year, is it not?

Col. NEWCOMER. No, sir. I think there was an increase made in the Senate.

Mr. FREAR. It was \$46,000 in the House bill.

Mr. DUPRÉ. There is \$5,000 more. You will see Calcasieu River and Pass has been added to it, and \$5,000 has been allotted for that purpose.

Col. NEWCOMER. That is right. I did not see that.

The CHAIRMAN. The next item:

Removing the water hyacinths, Alabama, Mississippi, Louisiana, and Texas: For the removal of the water hyacinth from the navigable waters in the States named in so far as it is or may become an obstruction to navigation, \$20,000.

Mr. FREAR. Colonel, do we receive any aid in keeping out these water hyacinths from Florida or Louisiana, or the other States, or from private parties, or does the Government do all of that?

Col. NEWCOMER. I do not understand anything has been done by Florida, but I know in Louisiana the localities do afford considerable help in this way, that these growths tend to accumulate and in that way finally clog the entire stream, and they have made arrangements down there with the people in that locality that the guards, and so forth, along the river shall keep these things in motion so they will move out with the tide and not accumulate and block up any one point. There is work of that kind being done.

Mr. DUPRÉ. And, generally, to look after the booms.

Col. NEWCOMER. Yes; the booms for catching them. They have contributed in that way. Of course, it is a very important matter to these people, because they are practically absolutely dependent, especially those engaged in the plantation industry, upon these streams for the handling of their traffic.

Mr. FREAR. That is the reason I was asking if they assisted in keeping them out of the rivers.

Col. NEWCOMER. They do assist in that way. I do not know whether they appropriate any definite sums for it.

The CHAIRMAN. I have just been given some information on that by Mr. Brooker. He says on the Withlacoochee River there is a very large cooperation by the localities.

The next item:

Atchafalaya River, Louisiana: For maintenance, \$20,000.

Next item:

Sabine River, Louisiana and Texas, Sabine-Neches Canal, Harbor at Sabine Pass and Port Arthur Canal, and Johnsons Bayou, Louisiana and Texas: For maintenance, \$110,000; continuing improvement of Sabine Pass and Port Arthur Canal, \$3,000,000; in all, \$410,000.

Mr. HULBERT. What is the urgent necessity, Colonel, for continuation of the improvement of Sabine Pass and Port Arthur, in this bill?

Col. NEWCOMER. There is an enormous export of oil made from that place, and those boats, of course, like all others, are increasing in size, and it is important that they be allowed to carry full loads.

Mr. SWITZER. This does not include that logging proposition in the Sabine River?

Col. NEWCOMER. No, sir; that has been cut out.

The CHAIRMAN. Next item:

Red and Sulphur Rivers, Arkansas and Texas, and Cypress Bayou, and waterway between Jefferson, Texas, and Shreveport, Louisiana: For maintenance, \$5,000.

Next item:

Galveston Harbor, Galveston Channel, Port Bolivar Channel, Texas City Channel, and Houston Ship Channel, Texas: For maintenance, \$480,000.

Mr. FREAR. Those are lumped together. What are the specific sums allotted to each, in order that we may have an understanding about that?

Col. NEWCOMER. The Galveston Harbor, maintenance, is \$50,000; Galveston Channel, \$100,000; Texas City Channel, \$50,000; and Port Bolivar Channel, \$30,000; and Houston Ship Channel, \$250,000.

Mr. FREAR. Did we receive contributions for that Houston Ship Channel, or do we receive contributions now?

Col. NEWCOMER. Not for maintenance.

Mr. FREAR. Not for maintenance?

Col. NEWCOMER. No, sir. Of course, they contributed to the construction of the dredges which we use in maintenance, but they do not contribute funds.

The CHAIRMAN. The next item:

Port Aransas, Texas: Continuing improvement and for maintenance, \$100,000.

Next item:

Anahuac Channel, mouth of Trinity River, Oyster and Clear Creeks, and Cedar, Chocolate, Turtle, Bustrop, Dickinson, Double, and East Bay Bayous, Texas: For maintenance, \$33,300.

Mr. FREAR. That is the only place where the Trinity River figures, I see?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item:

Waterway from Galveston to Corpus Christi and channel from Pass Cavallo to Port Lavaca, Texas: for maintenance, \$90,000.

Mr. FREAR. That is that canal, isn't it?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That 5-foot canal?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Is that very necessary? What is that—a case of naval necessity, or what?

Col. NEWCOMER. Oh, no, sir; that is simply——

Mr. FREAR. A commercial necessity?

Col. NEWCOMER. It is considered so—a commercial necessity. Of course, part of it is more than 5 feet. The channel through the canal from Galveston down to Aransas Pass is a 5-foot project; from Aransas Pass across to Corpus Christi it is a 12-foot project. Those localities have attempted to use it and do use it to some extent.

Mr. FREAR. There is not very much commerce on that?

Col. NEWCOMER. Not very much.

Mr. FREAR. And this is just for maintenance?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. About how long is that canal?

Col. NEWCOMER. I judge it is about 180 miles—that is, I mean the whole distance between the points. Of course, it is not all improved and not all worked over.

Mr. FREAR. You mean it is not all connected?

Col. NEWCOMER. It has a sufficient natural depth over a great deal of the distance. Matagorda Bay, for instance, has a natural depth of more than 5 feet.

Mr. DIES. There is nothing between Port Arthur and Galveston.

Col. NEWCOMER. No; there is nothing there; this runs from Galveston to Corpus Christi.

The CHAIRMAN. The next item:

Freeport Harbor, Texas: For maintenance of mouth of Brazos River, \$66,000; for improvement in accordance with the report submitted in House Document Numbered Fourteen hundred and sixty-nine, Sixty-third Congress, third session, and subject to the conditions set forth in said document, \$150,000; in all, \$216,000.

Mr. HULBERT. What did you consider, Colonel, was the special urgency for taking on this new project just now?

Col. NEWCOMER. This is a sulphur proposition. The shipments of sulphur have increased very largely and they find themselves very much hampered, indeed, to get out with the 18-foot depth which they have now.

Mr. HULBERT. And this provides for what depth?

Col. NEWCOMER. Twenty-four feet.

Mr. HULBERT. Will a 24-foot depth be sufficient?

Col. NEWCOMER. That is all they have asked for at the present time. They claim that with that increased depth, for the range of tonnage available, they could handle the tonnage.

Mr. HULBERT. Where is most of this sulphur transported?

Col. NEWCOMER. I do not recall. It is delivered along the coast, but just where I do not know.

Mr. COSTELLO. I presume the increased demand for sulphur is practically due to the war. The war practically debarred any importations along that line?

Col. NEWCOMER. Yes, sir.

Mr. COSTELLO. And we have resorted to our own natural resources so as to get sulphuric acid and the other supplies for the making of munitions?

Col. NEWCOMER. That is right. Of course the Italian supply of sulphur and the Spanish supply of pyrites is now practically cut off and we have to rely upon these two deposits—the one in Louisiana and the other here on the Brazos River in Texas—for our supply of sulphur.

Mr. COSTELLO. Prior to the war it was not a profitable transaction to operate these mines?

Mr. DIES. Oh, yes it was.

Mr. COSTELLO. Not to a very great extent. But since the war, they have been able to do a profitable business there and the probability is that with the increased facilities and the finances which they will get in due to the present increased demand, that they will be able to continue after the war has closed, so that we are building up a very important industry by making this improvement.

The CHAIRMAN. The next item:

Red, Black, Ouachita, Tensas, Bouef, and Salina Rivers, and Bayous Macon, Bartholomew, D'Arbonne, and Corney, Arkansas and Louisiana: For maintenance, \$65,000. The balance of appropriations heretofore made for the construction of Lock and Dam Numbered Seven, Ouachita River, Arkansas and Louisiana, is hereby made available, in the discretion of the Secretary of War, for the construction of Lock and Dam Numbered Five.

Mr. FREAR. What is the purpose of the transfer, Colonel?

Col. NEWCOMER. It has been found it would be very much more advantageous to build Lock and Dam No. 5 next rather than to

build Lock and Dam No. 7. Locks and Dams Nos. 2, 3, and 4 are practically completed and give navigation up to Monroe. Six and 8 have been completed, and if we put in 5, we will connect up with pool 6 and give it an outlet to the Mississippi. It is possible that No. 7 will not be required, as changes in 6 and 8 and dredging may carry the channel to Camden.

Mr. FREAR. What is the total amount you estimate for the project?

Col. NEWCOMER. We do not have any revised estimate for the entire improvement. The last appropriation carried, I think, from \$240,000 to \$250,000, for Lock and Dam No. 7, which we now propose to apply to 5, and I think it will take probably in the neighborhood of \$300,000 more to complete that dam. Now, it is expected certain changes can be made in 6 and 8 and combined with dredging above, so that we may not have to build any more locks and dams. The district officer has been investigating that proposition but he has not submitted a report to the department and of course we are not able to speak with personal knowledge upon that point. But he has expressed that opinion, however, himself. The project involved, according to the original plan, the construction of three more locks and dams, Nos. 5, 7, and 9.

Mr. FREAR. Up to this time there is very little commerce down on that river?

Col. NEWCOMER. Very little; yes, sir.

Mr. FREAR. And we have spent over \$1,000,000, as I remember?

Col. NEWCOMER. That is because, unfortunately, it was carried out in this way. They would first put a lock and dam in Louisiana and then another one in Arkansas; then another lock and dam in Louisiana, and another one in Arkansas; and the consequence is that these have been built isolated in this way and do not give any continuous communication. We now have at the Louisiana end continuous navigation up to Monroe, La., and the work certainly ought to be carried continuously from that point up, because the outlet is into the Red, Black, and Mississippi Rivers.

Mr. DUPRÉ. Has not the final completion of the dam at the mouth developed considerable navigation from Monroe down to New Orleans?

Col. NEWCOMER. We have not any report indicating the result of that yet. As a matter of fact, No. 3, I think it is, is just being completed, but I do not know definitely about that.

Mr. DUPRÉ. I happen to know there has been an additional steamship line put on since this end was available.

The CHAIRMAN. The next item:

Arkansas River, Arkansas and Oklahoma: For maintenance by snagging operations, \$35,000.

Next item:

Black and Current Rivers, Arkansas and Missouri; White, Saint Francis, and L'Anguille Rivers, and Blackfish Bayou, Arkansas: For maintenance, \$28,700.

Next item:

Cumberland River, Tennessee and Kentucky: For maintenance above Nashville, \$5,000; continuing improvement below Nashville, \$632,000; in all, \$637,000.

Mr. HULBERT. Is the necessity for continuing the improvement below Nashville commercial?

Col. NEWCOMER. That is mainly commercial; yes, sir. You have already authorized there the beginning of the construction of several locks and dams, and we usually build the locks and abutments of the dams first, and then additional money is required in order to put in the remaining work to make that available. This is to give an outlet from Nashville to the Ohio River; and, of course, we have already completed the improvement to some extent above Nashville.

Mr. FREAR. The new project has been left out?

Col. NEWCOMER. The new project above Nashville has been omitted.

Mr. FREAR. Is that as important, do you think, as the one here—of comparative importance with the one above Nashville?

Col. NEWCOMER. No, sir; we did not consider it so.

The CHAIRMAN. The next item:

Tennessee River, Tennessee, Alabama, and Kentucky: For maintenance and continuing improvement, \$401,000.

Mr. FREAR. What is the character of the continuing improvement contained in that, Colonel?

Col. NEWCOMER. This is for the work principally on the open channel which is in progress on that river. You see, we have the section above Chattanooga; then Chattanooga to Riverton and Riverton to the mouth. From Riverton to the mouth the funds on hand will probably be sufficient to complete. And between Florence and Riverton there is remaining work to be done, and then the dam at Bellefonte below Chattanooga. The lock and dam work is being held up by reason of the failure so far to comply with certain conditions imposed on the localities to handle the flowage damage. There was a proposition to build one high dam or two dams of smaller lift below Hales Bar, and when Congress authorized the change from one high dam to two low ones it provided that the localities should pay the cost of the flowage rights or damages, which we found on investigation to be much more expensive than first anticipated for the high dam.

Mr. FREAR. This is not for power purposes in any way?

Col. NEWCOMER. This does not involve that except as the high dam might afford an opportunity for some power development.

The CHAIRMAN. The next item:

Toledo, Port Clinton, Sandusky, Huron, Vermilion, Lorain, Cleveland, Fairport, Ashtabula, and Conneaut Harbors, Ohio: For maintenance, \$132,000, completing improvement of Lorain Harbor in accordance with the report submitted in House Document Numbered Nine hundred and eighty, Sixty-fourth Congress, first session, and subject to the conditions set forth in said documents, \$16,500. For improvement of Cuyahoga River, Cleveland Harbor, in accordance with the report submitted in House Document Numbered Seven hundred and seven, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$5,000: *Provided*, That the Government's share in the cost of the improvement in accordance with the final plans adopted shall not exceed \$400,000; in all, \$153,500. The unexpended balances of appropriations heretofore made and authorized for the improvement of Conneaut Harbor, Ohio, are hereby made available for completing improvement in accordance with the report submitted in House Document Numbered Nine hundred and eighty-three, Sixty-fourth Congress, first session.

Mr. FREAR. May I ask there, Colonel—it says that the Government's share in the cost of the improvement in accordance with the final plans adopted shall not exceed \$400,000—what portion of this fund goes into that project that is mentioned?

Col. NEWCOMER. Only \$5,000. The situation there is this, that the Cuyahoga River carries now a considerable commerce for a number of steel mills and other industries located along that stream, but the channel is very tortuous and the bigger boats can not get up to those mills. The city of Cleveland has in contemplation a project which involves a number of cut-offs, a very expensive work, and involves the destruction of a number of plants, in order to clear the way for us, and a considerable cost, of course, for dredging, bulkheads, and so on. An examination of that was authorized by Congress, and as a result of our investigation a report was made to Congress stating that a definite plan at that time could not be prepared on account of certain difficulties they had encountered about rights of way and things of that kind. And they recommended an appropriation of \$5,000, which would enable the Government to cooperate with the city in devising plans which would be practicable for making this improvement. It came out in that investigation, for instance, that the dredging would, apparently, be the proper share for the Government to assume, putting all other expenses, for the purchase of land rights, bridges, and bulkheads, amounting to a very much larger sum, on the locality, and that expense of dredging, as I recall, was something in the neighborhood of \$390,000. So that when this item was considered by the Senate committee they inserted in the bill as it was submitted to the Senate a statement that would serve notice on the community that in any plan that might be developed they would not want the Government considered to be obligated to go beyond such an expenditure.

Mr. FREAR. That would be \$390,000 more?

Col. NEWCOMER. Provided the plan is adopted along this line.

Mr. FREAR. Isn't this the same project that was struck out from the 1915 bill in the House? I think that is the one where it was claimed it was for the benefit of private parties that this extension was to be made.

Col. NEWCOMER. I do not recall at all about that; I did not have any connection with this at that time. I hardly think it could be for the interest of private parties. There is this feature, of course, that heretofore the improvement of the Cuyahoga River has been done entirely by the locality; the Government has confined its expenditures to the outer harbor—not entirely to the outer harbor, because we had a project on the river up to the first bridge. But above that point, where this work is expected to be done, it has been handled by the State, and they felt in making this very elaborate improvement, which involved a much larger cost, that the Government ought to cooperate, and it was thought it would be well if the Government cooperated in that way. But this project involves now only an expenditure of \$5,000, and Congress is to make further appropriation as estimates are submitted to it hereafter.

Mr. FREAR. Was that in the bill last year?

Col. NEWCOMER. No, sir; only in the bill as passed by the Senate committee. It was not in the House bill.

The CHAIRMAN. The next item:

Ohio River. Continuing improvement by the construction of locks and dams with a view to securing a navigable depth of nine feet, \$5,000,000. Upon the recommendation of the Chief of Engineers and the approval of the Secretary of War the project for the improvement of the Ohio River may be so modified as to

permit the construction of one lock and fixed dam to replace locks and dams numbered one and two, should such modification be deemed desirable and advantageous.

Mr. HULBERT. Would that be a costly proposition, Colonel?

Col. NEWCOMER. No; it will probably be a matter of economy, in this way: Lock and Dam No. 1 was built many years ago. They began the construction of that dam in 1875 and completed it in the eighties, and it is a movable dam and, like all dams of that type, of course it is subject to deterioration of a more rapid character than a fixed dam. It has been partially made obsolete also by changing this from a 6-foot to a 9-foot project. Dam No. 3 was raised 3 feet. In doing that, the change was made after the foundation of the dam was built, and we simply changed the movable parts; for instance, we lengthened out the wickets and props and things of that kind, so that we do not have a normal type of construction there. And Dam No. 2 is deteriorating rather rapidly, and the people of Pittsburgh who insisted originally that no dam of a fixed character should be placed below the harbor, on account of getting out with the coal boats, are now quite content to have these two replaced by a fixed dam and probably to have a number of others in the upper river if the situation should justify it in the future.

Mr. SWITZER. And making a larger harbor, too, wouldn't it?

Col. NEWCOMER. Yes, sir—throwing this dam further down the river than Dam No. 1.

Mr. FREAR. Can you just give a statement of how many dams have been built there—those that have been built and those that are being constructed?

Col. NEWCOMER. The dams are practically completed down to No. 18, and work has been authorized on all down as far as No. 30. Below that the alternate dams have been begun down as far as Louisville, and then there are two begun below Louisville. In other words, out of a total of 53, it is my impression about 35 have been begun.

Mr. FREAR. The work is over half finished, do you think—the locks and dams?

Col. NEWCOMER. Well, I should judge approximately half finished. I think, as a matter of fact, the last annual report gives it as 45 per cent completed.

Mr. SWITZER. A number of dams below No. 18 have been finished—No. 26, for instance.

Col. NEWCOMER. Oh, yes; several of them are finished. No. 37 is finished and, of course, Dam 41 is finished, but work is still in progress in the canal at Louisville. There are several of them nearly finished below there and we are now getting quite a stretch of continuous slack water. The upper river is finished and we are connecting up that section with the Muskingum, Little Kanawha, and Great Kanawha Rivers.

Mr. FREAR. It has helped navigation there thus far, do you think?

Col. NEWCOMER. Yes, sir. There is one thing I think I ought to mention here, which I do not believe I did before, with reference to these larger projects like the Ohio, upper Mississippi, and Missouri. I suppose the committee are all familiar with the fact that in those three projects the Government committed itself, by enactment of law, to a certain definite program of construction. On the Ohio River, for example, it provided in 1910 for the completion of the project in 12 years, and the same way on the upper Mississippi, and

on the upper Missouri it provided in 1912 for completion in 10 years. In other words, it has provided for the completion of all those three by 1922. Unfortunately, from our point of view, Congress has taken the view that this means completion of the appropriations by that time and not the completion of the work; in other words, that instead of providing the money fast enough to complete the work by 1922, it means the making of all appropriations by that time. In these cases the department has not felt free to eliminate items where Congress itself has pledged itself to a certain program of construction.

Mr. FREAR. How much has been spent, generally speaking, on the Ohio River itself, if you know?

Col. NEWCOMER. In the neighborhood of \$30,000,000.

Mr. FREAR. You mean on this project?

Col. NEWCOMER. On the new project, yes. There has been more than that, of course, spent on all work, including the previous project—something like \$45,000,000 all together. It is going to take, as I recall now, \$33,000,000 more, including this \$5,000,000 to complete it accordance with the estimated cost. The total work will cost, in round numbers, \$75,000,000.

Mr. FREAR. Will it be completed within the estimates, do you think? Is that the indication?

Col. NEWCOMER. It is a pretty rash thing to say that under the present conditions. We were hoping it would; but of course under the present unsettled conditions we could not do it. There are several features that will enter into the work that may, however, help it. One is this, that in the lower river, for instance, we may find it practicable and preferable to substitute the use of dredging below Dam 48, which is the lowest one now, just below the Green River. Below that point it may be found practicable not to build dams but rely upon dredging. The river is very wide and we are faced with conditions which are more difficult to handle because of the large amount of sand and its movement in sand waves. That point has not been decided definitely. Of course, if we do omit the dams down there, that will be a very substantial saving in the cost of construction.

Mr. FREAR. That will take out from seven to five dams?

Col. NEWCOMER. Something like that; yes, sir.

Mr. SWITZER. Then, didn't you eliminate one—

Col. NEWCOMER. We eliminated No. 42 and we expect to eliminate No. 39 above Louisville.

Mr. FREAR. And to reach the same results by dredging?

Col. NEWCOMER. That is what we hope on the lower river. That matter was investigated by the same board that reported in favor of the dams as against dredging; but on further consideration of that matter we are inclining to the opinion that it may be found advisable to substitute dredging on that lower stretch of the river.

The CHAIRMAN. The next item:

Grand Marais, Marquette, Marquette Bay, and Ontonagon Harbors, and Keweenaw Waterway, Michigan; Ashland and Port King Harbors, Wisconsin; Duluth-Superior Harbor, Minnesota and Wisconsin; Agate Bay and Grand Marais Harbors, Minnesota. For maintenance, \$175,000; completing improvement of Ashland Harbor in accordance with the modified plans in the report submitted in House Document Numbered Sixteen hundred and ninety-eight, Sixty-fourth Congress, second session, \$10,000; in all, \$185,000.

Mr. FREAR. Could you give the amounts, in a general way, without referring to your notes, for those different harbors?

Col. NEWCOMER. The Grand Marais Harbor of Refuge, \$10,000 for maintenance; Ashland Harbor—that item has not been changed; Duluth-Superior Harbor, maintenance, \$45,000; Keweenaw Waterway, \$105,000.

Mr. FREAR. Was that the Keweenaw?

Col. NEWCOMER. Keweenaw Waterway was \$105,000. That has hitherto been maintained under the indefinite appropriation for operating and care, but it was deemed advisable to put it in the regular river and harbor appropriation, because it has no lock in it. I think that covers all of the items. There is no change at all; it is simply a grouping together and summing up of the items.

The CHAIRMAN. The next item is:

Saint Joseph Harbor and River, Saugatuck Harbor and Kalamazoo River, South Haven, Holland, Grand Haven, Muskegon, White Lake, Ludington, Manistee, Portage Lake, Arcadia, Frankfort, Charlevoix, and Petosky Harbors, and Grand River, Michigan: For maintenance, \$112,050; continuing improvement of Manistee Harbor, \$28,700; in all, \$140,750.

The CHAIRMAN. The next item is:

Mackinac, Cheboygan, Rogers City, Alpena, Harbor Beach, and Monroe Harbors, Saginaw, Black, Clinton, Rouge, and Detroit Rivers, Michigan: For maintenance, \$13,500; for improvement of Harbor Beach Harbor in accordance with the report submitted in House Document Numbered Seventeen hundred, Sixty-fourth Congress, second session, \$100,000; in all, \$113,500.

Col. NEWCOMER. The words "and Detroit" should be omitted from that item.

Mr. FREAR. What was the necessity, Colonel, for this improvement of Harbor Beach Harbor?

Col. NEWCOMER. That is in order to make that harbor available as a refuge for the big boats.

Mr. FREAR. Was that in the last bill?

Col. NEWCOMER. I think that was in the bill as it passed the House; yes, sir.

Mr. FREAR. What page? Oh, yes; I see; it is on page 38.

The CHAIRMAN. Colonel, just to have it in the record, I have had a number of letters inquiring about the probable action of the committee with regard to the new improvement of Rouge River.

Col. NEWCOMER. We did not include that in this bill.

The CHAIRMAN. The next item is:

Ship channel connecting waters of the Great Lakes between Chicago, Duluth, and Buffalo: For maintenance, \$185,000.

Col. NEWCOMER. And if you will please insert after that "including St. Marys River"—I simply wrote it up at the top of the page myself—"including St. Marys River, St. Clair River, the channels in Lake St. Clair, and Detroit River, Michigan"; that makes a better grouping than I had before.

The CHAIRMAN. The channel in Lake St. Clair?

Col. NEWCOMER. Lake St. Clair.

Mr. BOOHER. And what other river?

Col. NEWCOMER. And Detroit River, Michigan. It does not make any change in the sum.

The CHAIRMAN. The next item is:

Manistique Harbor, Michigan, Menominee, Oconto, Green Bay, Algoma, Kewaunee, Two Rivers, Manitowoc, Sheboygan, Port Washington, Milwaukee, Racine, Kenosha, and Waukegan Harbors, Sturgeon Bay and Lake Michigan Ship Canal, and Fox River, Wisconsin: For maintenance, \$52,100. The project for the improvement of Green Bay Harbor, Wisconsin, is hereby modified to include the maintenance of the turning basin at Depere in accordance with the report submitted in House Document Numbered One thousand and seventeen, Sixty-fourth Congress, first session.

Mr. FREAR. How does that happen to be mentioned especially, Colonel? Is there any work being done on that now?

Col. NEWCOMER. We have now two projects, one for the Green Bay Harbor, which includes a section of Fox River, and then for harbor at Depere itself. This is to consolidate them and carry them as one.

Mr. FREAR. There is no work being done on either at this time, is there?

Col. NEWCOMER. There is work of maintenance.

Mr. FREAR. This is intended to cover both?

Col. NEWCOMER. Yes, sir. Really the harbor at Depere is simply a turning basin at the end of the channel, which is a part of the harbor of Green Bay, and they ought to be one project and not two different projects.

Mr. DUPRÉ. Is there not a Cheboygan in Michigan and a Sheboygan in Wisconsin; is not that correct?

Col. NEWCOMER. Yes; that is right.

Mr. DUPRÉ. You will notice it at the bottom of page 19.

Col. NEWCOMER. Yes; that is right.

The CHAIRMAN. The next item is:

Saint Croix River, Wisconsin and Minnesota, Minnesota River, Minnesota, Lake Traverse, Minnesota and South Dakota, Red River of the North, Minnesota and North Dakota, Warroad Harbor and River, Zippel Bay, and Lake of the Woods, Minnesota: For maintenance, \$3,000.

Mr. FREAR. Where are those amounts taken from?

Col. NEWCOMER. I think that is practically all—Warroad Harbor and River, \$2,000, and Zippel Bay, \$1,000. The other items have no proposed expenditure.

The CHAIRMAN. The next item is:

Chicago and Calumet Harbors, Chicago and Illinois Rivers, Illinois, Calumet River, Illinois and Indiana, Indiana and Michigan City Harbors, Indiana: For maintenance, \$115,000; completing improvement of Indiana Harbor, \$395,200; in all, \$510,200.

Mr. FREAR. What is that last project, Colonel?

Col. NEWCOMER. That is the outer breakwater.

Mr. FREAR. In Indiana Harbor?

Col. NEWCOMER. Yes, sir. The outer harbor there is being protected by a breakwater, and this is for the completion of that work.

Mr. FREAR. Is that a very important project?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That has to be finished at this time?

Col. NEWCOMER. It is very desirable to finish it. Of course, you know there are very large steel plants at the mouth, having their docks right at the opening into the river.

Mr. SWITZER. Is that not near Gary?

Col. NEWCOMER. Yes; it is near Gary.

Mr. FREAR. I remember the question was raised about that by one of the Illinois Members the last time, and he criticized it very severely.

Col. NEWCOMER. They have a very large tonnage of iron ore, particularly at this place.

Mr. SWITZER. I think his criticism was because the docks were being used by some corporation, for the benefit of some corporation.

Mr. FREAR. Yes; that is right. This was not in the last bill, was it?

Mr. HULBERT. Yes; it was.

The CHAIRMAN. The next item is:

Mississippi River, from the mouth of the Ohio River to and including the mouth of the Missouri River: Continuing improvement and for maintenance, \$350,000.

Mr. FREAR. What is the character of the improvement there?

Col. NEWCOMER. That is for maintenance of the 8-foot channel.

Mr. FREAR. That is just for maintenance?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That has been established, has it not; that is, completed?

Col. NEWCOMER. The project really has not been completed in this way. It involves an additional fixing of the channel by means of dikes and bank revetments. That work had been proceeding for a number of years before they found that they can maintain the 8-foot depth by the use of dredges. Of course, the project contemplates going ahead and putting in these additional revetments and training walls or dikes, so as to reduce the cost of maintenance by dredging, but under present conditions we thought it would be better not to proceed with the project. In other words, the commerce that is on that river hardly appeared to justify the expenditure of a million dollars and more that they had been regularly providing for this improvement for several years, and we find we can maintain the depth with the dredges, and for that reason we have temporarily discontinued further operations.

Mr. FREAR. I understand that on 200 miles of that river there has been about \$18,000,000 spent.

Col. NEWCOMER. There has been a very large expenditure made.

Mr. FREAR. That is the one on which Senator Burton said there had been more spent than on the entire Rhine River, and the Rhine River had 14,000,000 tons, and of course this point of the river is insignificant. I think it has altogether 153,000 tons, as given by Col. Thompson.

Col. NEWCOMER. The tonnage has been diminishing rather than growing. At one time there was a substantial tonnage there, but it has been diminishing.

Mr. DUPRÉ. Is that the matter reverted to by Mr. Kennedy this morning?

Col. NEWCOMER. No; this is below the Missouri and the other is above the Missouri. That is the next item he is referring to.

The CHAIRMAN. The next item is:

Mississippi River from the mouth of the Missouri River to Minneapolis, Minnesota: Continuing improvement and for maintenance, \$1,200.

Mr. FREAR. That is the one Mr. Kennedy referred to. We spent something like \$28,000,000 on that, where only one line of boats run four months in the year.

The CHAIRMAN. I might mention, for the information of the committee, that there is at present quite an active movement in the Mississippi Valley States, particularly in view of the national stress, to develop water carriers on the Mississippi River and its tributaries. A meeting has been called for May 8 and 9, to be held at St. Louis, at which the governors of a number of the States expect to be present, and also representatives of the commercial organizations, and they have been in communication with the Chief of Engineers about it.

Mr. FREAR. Do you feel, Colonel, that it is possible to ever secure any appreciable commerce on that river until we control the railroad rates?

Col. NEWCOMER. I think it will be necessary probably to enforce a change in the policy that the railroads have ordinarily pursued in the past of not prorating with the boat lines, and steps have already been accomplished in that direction. I just saw in the last issue of the Railway Review the statement of a decision of the Interstate Commerce Commission, just recently handed down, requiring a railroad at St. Louis to prorate with the boat line that is running between St. Louis and Memphis and New Orleans, on the same basis that it prorates with its rail connections. That has been one of the difficulties in the past that has hampered, of course, river traffic. For instance, the Kanawha River ships most of its coal, you might say, to the Cincinnati market, and a great deal of coal from the Kanawha Basin goes to localities that are reached by rail from Cincinnati. The Cincinnati railroads, or roads leading out from Cincinnati, charge the local rates to any coal traffic offered them by boat, by water carrier, whereas they would receive coal delivered by rail connection and prorate with them on a basis that would enable them to deliver cheaper than the sum of the local rail-and-water rates. Of course, if you require the rail carrier to prorate with the water carrier on the same terms he does with the rail carrier, you will have competition that will enable the water carrier to do business.

Mr. FREAR. There might be direct competition between water carriers. For instance, there would be between Minneapolis, St. Paul, and St. Louis.

Col. NEWCOMER. We can expect to develop considerable commerce on the water between communities along side of the water that do not involve rail carriers, but if you are going to get any very large development there that will have to be partly by water and partly by rail, it is essential to give equal treatment in order to live.

Mr. FREAR. Commerce has decreased about 90 per cent on that river.

Col. NEWCOMER. It is very much less than it used to be.

The CHAIRMAN. The next item is:

Mississippi River between Saint Paul and Minneapolis, and between Brainerd and Grand Rapids, Mississippi and Leech Rivers, and reservoirs at headwaters of Mississippi River: For maintenance, \$2,000; continuing improvement of Mississippi and Leech Rivers, \$50,000; in all, \$52,000.

Mr. HULBERT. None of these last three items have been urged except because of their commercial activity?

Col. NEWCOMER. That is substantially so.

The CHAIRMAN. The next item is:

Osage and Gasconade Rivers, Missouri, and Kansas River, Kansas: Continuing improvement and for maintenance of Osage and Gasconade Rivers, \$20,000; com-

pleting improvement of Kansas River in accordance with the report submitted in House Document Numbered Five hundred and eighty-four, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$10,000; in all, \$30,000.

The next item is:

Missouri River: For maintenance and continuing improvement with a view to securing a permanent six-foot channel between Kansas City and the mouth of the river, \$1,000,000; for snagging and maintenance between Kansas City and Sioux City, \$35,000; for maintenance between Sioux City and Fort Benton, \$50,000; in all, \$1,085,000.

Mr. BOOHER. Now, the maintenance between Kansas City and Sioux City and between Sioux City and Fort Benton have been reduced, or are they the same?

Col. NEWCOMER. The maintenance is the same, I think.

Mr. BOOHER. I see; it is the same.

Now, the next item, Colonel, is stricken out. I am not fault-finding, but I am investigating. Why did you strike out the \$25,000 for completing that improvement near St. Joseph?

Mr. DUPRÉ. It is at the top of page 39, line 7.

Col. NEWCOMER. Well, we did not consider that as of any substantial importance as a commercial or defense proposition.

Mr. BOOHER. Well, don't you think it is very necessary to save the work that you have done there now, where the people have paid \$50,000, and the Government has put in \$75,000?

Col. NEWCOMER. Well, I do not know to what extent that work would be necessary.

Mr. BOOHER. Here is the situation there, Colonel. You know there is about 3 or 4 miles of revetment commencing north and west of St. Joseph, and running down to perhaps 2 miles below the city of St. Joseph.

Col. NEWCOMER. I know in a general way.

Mr. BOOHER. Now, when they commenced work there to prevent the river from going into the lake they did not commence at the lower end of the revetment, but just as far down as they possibly could, and they built it down there, and it is one of the finest revetments I ever saw. But if this river begins to cut through here at the head of this new work, as it is very likely to do and as it always has done, that is going to be an entire loss—that \$125,000. I am very much afraid that when the June rise comes in the river we will lose that revetment.

Col. NEWCOMER. Of course certain work could be done of an emergency character under an emergency appropriation. We did not understand this was work of special importance from the point of view of the navigation of the river.

Mr. BOOHER. Well, it is not, unless you want to save this \$125,000 that has been put in there. Now, those people are not able to raise a dollar more down there. They raised \$50,000 for that work. They are a set of gardeners, very small farmers, and they could not raise another \$1,000 to save their necks, and the estimates of your boards have always been that it would take \$150,000, and the people were to raise half of it in the first instance, but they could not do it to save their lives. They raised \$50,000, and they could not go any further, and the Senate released them from the \$25,000, and we made an appropriation in the bill and gave them an extra \$25,000. I know

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency to save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through as I understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of that section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt any grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet last spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it, if you wish me to do so. We do not object to having the item in there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer may be right, but every engineer that has made a report on that, except the last board, reported that it would go back down the old channel of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will destroy a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject at this point, Col. Newcomer will be requested to look into the matter further and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time you want me to-morrow and what time I leave to-night. Of course, I will have to get in touch with the Chief of Engineers in the meantime.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little project in that?

Col. NEWCOMER. I will be very glad to take it up with the Chief of Engineers.

The CHAIRMAN. Without objection, the Colonel will be requested to take up your project with the Chief of Engineers with the same end in view.

Mr. FREAR. I notice there is \$35,000 for maintenance from Kansas City to Sioux City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand hauled 2 miles. That leaves about 1,000 tons. You have spent already \$3,235,000 on this stretch. I was just wondering whether or not that was put in on account of preparedness or on account of commerce?

Col. NEWCOMER. I guess it would be a little bit hard to defend it on either one of those grounds, except in this way: That it has been deemed advisable on that upper Missouri River to keep the snag boats going and keep the stream clear. There is a little local movement of traffic at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to use the stream they can do so, so far as the natural condition of the channel will permit.

Mr. FREAR. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 between Kansas City and the mouth of the river put in because of commercial necessity or preparedness there?

Col. NEWCOMER. That, of course, was in order to carry out the program adopted by Congress for the improvement of that stretch within a period of 10 years. We have there, however, a navigation company in action, transacting business. It is probably doing it on more hopeful lines than anywhere else on our western rivers. In other words, they have arrangements whereby they receive shipments on railroad sidings, transfer them to boats, and transport them over this stretch of the river, and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and businesslike way.

Mr. FREAR. That is at the present time?

Col. NEWCOMER. Yes.

Mr. FREAR. But it is a very small commerce?

Col. NEWCOMER. It is a small commerce. Of course, they can not carry a big commerce until we get a better channel, but they have begun this business on the promise that if they did put their money in it, Congress would go ahead and do the work.

Mr. FREAR. Has the channel been completed above Kansas City or Sioux City?

Col. NEWCOMER. There has been practically no work above, except isolated bits of revetment that were put in.

Mr. FREAR. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

Col. NEWCOMER. There has never been any project there, except for snagging. We have never had any definite project depth adopted there.

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cut mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparation, yet it occurs to me that it is the very breath of emergency save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through and we understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of the section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt a grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet of the spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around the lake.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one way and another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it if you wish me to do so. We do not object to having the report there, if you wish to put it in, although it did not appear to us to be a matter that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer is right, but every engineer that has made a report on that, the last board, reported that it would go back down the old course of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will save a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject a point, Col. Newcomer will be requested to look into the matter and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time I want me to-morrow and what time I leave to-night. Of course I will have to get in touch with the Chief of Engineers in the morning.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little bill in that?

COMER. I will be very glad to take it up with the Chief S.

ARMAN. Without objection, the Colonel will be requested to put our project with the Chief of Engineers with the same

R. I notice there is \$35,000 for maintenance from Kansas City. I want to ask whether that is for preparedness or otherwise. According to page 7673 of the report the commission says 101,822 tons last year, of which 100,335 tons was sand and shales. That leaves about 1,000 tons. You have spent about \$5,000 on this stretch. I was just wondering whether or not it is put in on account of preparedness or on account of

COMER. I guess it would be a little bit hard to defend it on the basis of those grounds, except in this way: That it has been necessary to keep the upper Missouri River to keep the snag and keep the stream clear. There is a little local movement at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of navigation in that way, so that wherever there is a tendency or debris in the stream they can do so, so far as the natural condition of the river will permit.

R. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 for Kansas City and the mouth of the river put in because of necessity or preparedness there?

COMER. That, of course, was in order to carry out the project provided by Congress for the improvement of that stretch within 10 years. We have there, however, a navigation company doing a factoring business. It is probably doing it on more hope than anywhere else on our western rivers. In other words, arrangements whereby they receive shipments on railroad cars and transfer them to boats, and transport them over this stretch and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and proper way.

R. That is at the present time?

COMER. Yes.

R. But it is a very small commerce?

COMER. It is a small commerce. Of course, they can not do a large commerce until we get a better channel, but they have a business on the promise that if they did put their money in the project it would go ahead and do the work.

R. Has the channel been completed above Kansas City or not?

COMER. There has been practically no work above, except a little of revetment that were put in.

R. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

COMER. There has never been any project there, except for the one now proposed. We have never had any definite project depth adopted

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparation, yet it occurs to me that it is the very breath of emergency save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through and we understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of the section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt a grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet of the spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around the lake.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it if you wish me to do so. We do not object to having the item there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer is right, but every engineer that has made a report on that, the last board, reported that it would go back down the old course of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will save a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject a point, Col. Newcomer will be requested to look into the matter and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time I want me to-morrow and what time I leave to-night. Of course I will have to get in touch with the Chief of Engineers in the morning.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little item in that?

COMER. I will be very glad to take it up with the Chief S.

ARMAN. Without objection, the Colonel will be requested to put our project with the Chief of Engineers with the same

R. I notice there is \$35,000 for maintenance from Kansas City. I want to ask whether that is for preparedness or commerce. According to page 7673 of the report the commerce is 101,822 tons last year, of which 100,335 tons was sand and shales. That leaves about 1,000 tons. You have spent about \$5,000 on this stretch. I was just wondering whether or not it was put in on account of preparedness or on account of

COMER. I guess it would be a little bit hard to defend it on the basis of those grounds, except in this way: That it has been considered advisable on that upper Missouri River to keep the snag and keep the stream clear. There is a little local movement at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of navigation. That way, so that wherever there is a tendency or desire to improve the stream they can do so, so far as the natural condition of the river will permit.

R. That question was just preliminary to the next question. On the basis of that fact, I was going to ask, Was the \$1,000,000 for Kansas City and the mouth of the river put in because of necessity or preparedness there?

COMER. That, of course, was in order to carry out the project authorized by Congress for the improvement of that stretch within 10 years. We have there, however, a navigation company doing a successful business. It is probably doing it on more hope than anywhere else on our western rivers. In other words, the arrangements whereby they receive shipments on railroad cars and transfer them to boats, and transport them over this stretch and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and successful way.

R. That is at the present time?

COMER. Yes.

R. But it is a very small commerce?

COMER. It is a small commerce. Of course, they can not do a large commerce until we get a better channel, but they have a business on the promise that if they did put their money there it would go ahead and do the work.

R. Has the channel been completed above Kansas City or not?

COMER. There has been practically no work above, except a little of revetment that were put in.

R. Was it once cleared up according to the original project it ever been completed according to the original project?

COMER. There has never been any project there, except for the improvement. We have never had any definite project depth adopted

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through and understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of the section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt a grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet of the spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around the lake.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one and then another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the one side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it if you wish me to do so. We do not object to having the matter there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer is right, but every engineer that has made a report on that, the last board, reported that it would go back down the old course of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will save a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject a point, Col. Newcomer will be requested to look into the matter and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time I want to go to-morrow and what time I leave to-night. Of course I will have to get in touch with the Chief of Engineers in the morning.

Mr. BOOHER. I am anxious to save that money, both for the Government and the people.

Mr. GRAY. Mr. Chairman, can you not include my little bill in that?

COMER. I will be very glad to take it up with the Chief.

MAN. Without objection, the Colonel will be requested to put our project with the Chief of Engineers with the same

R. I notice there is \$35,000 for maintenance from Kansas City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand and gravel. That leaves about 1,000 tons. You have spent about \$5,000 on this stretch. I was just wondering whether or not it was put in on account of preparedness or on account of

COMER. I guess it would be a little bit hard to defend it on the basis of those grounds, except in this way: That it has been necessary to keep the upper Missouri River to keep the snag and keep the stream clear. There is a little local movement at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to change the stream they can do so, so far as the natural condition of the river will permit.

R. That question was just preliminary to the next question. I was going to ask, Was the \$1,000,000 put in because of necessity or preparedness there?

COMER. That, of course, was in order to carry out the project authorized by Congress for the improvement of that stretch within 10 years. We have there, however, a navigation company doing a successful business. It is probably doing it on more hope than anywhere else on our western rivers. In other words, they make arrangements whereby they receive shipments on railroad cars and transfer them to boats, and transport them over this stretch and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and successful way.

R. That is at the present time?

COMER. Yes.

R. But it is a very small commerce?

COMER. It is a small commerce. Of course, they can not do much commerce until we get a better channel, but they have business on the promise that if they did put their money there it would go ahead and do the work.

R. Has the channel been completed above Kansas City or not?

COMER. There has been practically no work above, except a little of revetment that were put in.

R. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

COMER. There has never been any project there, except for the improvement of the channel. We have never had any definite project depth adopted

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency to save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through as I understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of that section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt any grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet last spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it, if you wish me to do so. We do not object to having the item in there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer may be right, but every engineer that has made a report on that, except the last board, reported that it would go back down the old channel of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will destroy a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject at this point, Col. Newcomer will be requested to look into the matter further and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time you want me to-morrow and what time I leave to-night. Of course, I will have to get in touch with the Chief of Engineers in the meantime.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little project in that?

Col. NEWCOMER. I will be very glad to take it up with the Chief of Engineers.

The CHAIRMAN. Without objection, the Colonel will be requested to take up your project with the Chief of Engineers with the same end in view.

Mr. FREAR. I notice there is \$35,000 for maintenance from Kansas City to Sioux City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand hauled 2 miles. That leaves about 1,000 tons. You have spent already \$3,235,000 on this stretch. I was just wondering whether or not that was put in on account of preparedness or on account of commerce?

Col. NEWCOMER. I guess it would be a little bit hard to defend it on either one of those grounds, except in this way: That it has been deemed advisable on that upper Missouri River to keep the snag boats going and keep the stream clear. There is a little local movement of traffic at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to use the stream they can do so, so far as the natural condition of the channel will permit.

Mr. FREAR. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 between Kansas City and the mouth of the river put in because of commercial necessity or preparedness there?

Col. NEWCOMER. That, of course, was in order to carry out the program adopted by Congress for the improvement of that stretch within a period of 10 years. We have there, however, a navigation company in action, transacting business. It is probably doing it on more hopeful lines than anywhere else on our western rivers. In other words, they have arrangements whereby they receive shipments on railroad sidings, transfer them to boats, and transport them over this stretch of the river, and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and businesslike way.

Mr. FREAR. That is at the present time?

Col. NEWCOMER. Yes.

Mr. FREAR. But it is a very small commerce?

Col. NEWCOMER. It is a small commerce. Of course, they can not carry a big commerce until we get a better channel, but they have begun this business on the promise that if they did put their money in it, Congress would go ahead and do the work.

Mr. FREAR. Has the channel been completed above Kansas City or Sioux City?

Col. NEWCOMER. There has been practically no work above, except isolated bits of revetment that were put in.

Mr. FREAR. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

Col. NEWCOMER. There has never been any project there, except for snagging. We have never had any definite project depth adopted there.

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency to save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through as I understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of that section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt any grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet last spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it, if you wish me to do so. We do not object to having the item in there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer may be right, but every engineer that has made a report on that, except the last board, reported that it would go back down the old channel of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will destroy a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject at this point, Col. Newcomer will be requested to look into the matter further and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time you want me to-morrow and what time I leave to-night. Of course, I will have to get in touch with the Chief of Engineers in the meantime.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little project in that?

Col. NEWCOMER. I will be very glad to take it up with the Chief of Engineers.

The CHAIRMAN. Without objection, the Colonel will be requested to take up your project with the Chief of Engineers with the same end in view.

Mr. FREAR. I notice there is \$35,000 for maintenance from Kansas City to Sioux City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand hauled 2 miles. That leaves about 1,000 tons. You have spent already \$3,235,000 on this stretch. I was just wondering whether or not that was put in on account of preparedness or on account of commerce?

Col. NEWCOMER. I guess it would be a little bit hard to defend it on either one of those grounds, except in this way: That it has been deemed advisable on that upper Missouri River to keep the snag boats going and keep the stream clear. There is a little local movement of traffic at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to use the stream they can do so, so far as the natural condition of the channel will permit.

Mr. FREAR. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 between Kansas City and the mouth of the river put in because of commercial necessity or preparedness there?

Col. NEWCOMER. That, of course, was in order to carry out the program adopted by Congress for the improvement of that stretch within a period of 10 years. We have there, however, a navigation company in action, transacting business. It is probably doing it on more hopeful lines than anywhere else on our western rivers. In other words, they have arrangements whereby they receive shipments on railroad sidings, transfer them to boats, and transport them over this stretch of the river, and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and businesslike way.

Mr. FREAR. That is at the present time?

Col. NEWCOMER. Yes.

Mr. FREAR. But it is a very small commerce?

Col. NEWCOMER. It is a small commerce. Of course, they can not carry a big commerce until we get a better channel, but they have begun this business on the promise that if they did put their money in it, Congress would go ahead and do the work.

Mr. FREAR. Has the channel been completed above Kansas City or Sioux City?

Col. NEWCOMER. There has been practically no work above, except isolated bits of revetment that were put in.

Mr. FREAR. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

Col. NEWCOMER. There has never been any project there, except for snagging. We have never had any definite project depth adopted there.

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency to save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through as I understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of that section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt any grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet last spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it, if you wish me to do so. We do not object to having the item in there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer may be right, but every engineer that has made a report on that, except the last board, reported that it would go back down the old channel of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will destroy a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject at this point, Col. Newcomer will be requested to look into the matter further and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time you want me to-morrow and what time I leave to-night. Of course, I will have to get in touch with the Chief of Engineers in the meantime.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little project in that?

Col. NEWCOMER. I will be very glad to take it up with the Chief of Engineers.

The CHAIRMAN. Without objection, the Colonel will be requested to take up your project with the Chief of Engineers with the same end in view.

Mr. FREAR. I notice there is \$35,000 for maintenance from Kansas City to Sioux City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand hauled 2 miles. That leaves about 1,000 tons. You have spent already \$3,235,000 on this stretch. I was just wondering whether or not that was put in on account of preparedness or on account of commerce?

Col. NEWCOMER. I guess it would be a little bit hard to defend it on either one of those grounds, except in this way: That it has been deemed advisable on that upper Missouri River to keep the snag boats going and keep the stream clear. There is a little local movement of traffic at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to use the stream they can do so, so far as the natural condition of the channel will permit.

Mr. FREAR. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 between Kansas City and the mouth of the river put in because of commercial necessity or preparedness there?

Col. NEWCOMER. That, of course, was in order to carry out the program adopted by Congress for the improvement of that stretch within a period of 10 years. We have there, however, a navigation company in action, transacting business. It is probably doing it on more hopeful lines than anywhere else on our western rivers. In other words, they have arrangements whereby they receive shipments on railroad sidings, transfer them to boats, and transport them over this stretch of the river, and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and businesslike way.

Mr. FREAR. That is at the present time?

Col. NEWCOMER. Yes.

Mr. FREAR. But it is a very small commerce?

Col. NEWCOMER. It is a small commerce. Of course, they can not carry a big commerce until we get a better channel, but they have begun this business on the promise that if they did put their money in it, Congress would go ahead and do the work.

Mr. FREAR. Has the channel been completed above Kansas City or Sioux City?

Col. NEWCOMER. There has been practically no work above, except isolated bits of revetment that were put in.

Mr. FREAR. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

Col. NEWCOMER. There has never been any project there, except for snagging. We have never had any definite project depth adopted there.

that old stream so well that I am afraid the \$125,000 will go into the river, because when it once commences cutting you know it cuts mighty fast when it starts, and it seems to me, although it is not an emergency for navigation, and it is not an emergency for preparedness, yet it occurs to me that it is the very breath of emergency to save what you have done there. We have spent \$125,000 there, and I am afraid now, if you do not connect those two revetment works together, that you are going to lose what you have done.

Mr. HULBERT. Mr. Chairman, I recall very well the hearing we had on that matter, and we had maps here showing the situation, and it looks to me, as Judge Booher says, that it is a matter of spending \$25,000 to save the greater part of \$125,000.

Mr. SWITZER. There is also grave danger of cutting through as I understand it.

Mr. HULBERT. If it cuts through, one of the principal towns of that section will be left entirely off the river.

Col. NEWCOMER. I do not think the department has ever felt any grave apprehension about its cutting through in that locality.

Mr. BOOHER. Do you know that it went through within 19 feet last spring—just 19 feet?

Col. NEWCOMER. What I mean is that even cutting into the lake does not mean that the river would desert its old course and go down that way. We have so many cases where the river does go around.

Mr. BOOHER. It formerly ran down through that lake, Colonel.

Col. NEWCOMER. At one time it was an old river bed.

Mr. BOOHER. It is just a stream of lakes, coming down one after another, from St. Joseph to north of Kansas City, within 11 miles of Kansas City, and these lakes will not be higher on the other side of that lake than it is the other way, and the Missouri River does not run up; it goes down, and quite fast.

Mr. KETTNER. Mr. Chairman, can we not submit this or pass some sort of resolution to have Judge Booher take it up with the Chief of Engineers?

Col. NEWCOMER. I will speak to the Chief of Engineers about it, if you wish me to do so. We do not object to having the item in there, if you wish to put it in, although it did not appear to us to be an item that would be justified.

Mr. BOOHER. It is only to save the money that the Government has put in and these people have put in. Your engineer may be right, but every engineer that has made a report on that, except the last board, reported that it would go back down the old channel of the river, and that it would be below the old channel connecting the Missouri River away down below. If it does it, it will destroy a lot of very valuable land and property.

The CHAIRMAN. Without objection, if I may interject at this point, Col. Newcomer will be requested to look into the matter further and report to the committee to-morrow.

Col. NEWCOMER. Very well; it is a question of what time you want me to-morrow and what time I leave to-night. Of course, I will have to get in touch with the Chief of Engineers in the meantime.

Mr. BOOHER. I am anxious to save that money, both for the people and the Government.

Mr. GRAY. Mr. Chairman, can you not include my little project in that?

Col. NEWCOMER. I will be very glad to take it up with the Chief of Engineers.

The CHAIRMAN. Without objection, the Colonel will be requested to take up your project with the Chief of Engineers with the same end in view.

Mr. FREAR. I notice there is \$35,000 for maintenance from Kansas City to Sioux City. I want to ask whether that is for preparedness or for commerce. According to page 7673 of the report the commerce was 101,822 tons last year, of which 100,335 tons was sand hauled 2 miles. That leaves about 1,000 tons. You have spent already \$3,235,000 on this stretch. I was just wondering whether or not that was put in on account of preparedness or on account of commerce?

Col. NEWCOMER. I guess it would be a little bit hard to defend it on either one of those grounds, except in this way: That it has been deemed advisable on that upper Missouri River to keep the snag boats going and keep the stream clear. There is a little local movement of traffic at a number of points, and we want to avoid the accumulation of snags blocking the channel and the obstruction of the stream in that way, so that wherever there is a tendency or desire to use the stream they can do so, so far as the natural condition of the channel will permit.

Mr. FREAR. That question was just preliminary to the next question. In view of that fact, I was going to ask, Was the \$1,000,000 between Kansas City and the mouth of the river put in because of commercial necessity or preparedness there?

Col. NEWCOMER. That, of course, was in order to carry out the program adopted by Congress for the improvement of that stretch within a period of 10 years. We have there, however, a navigation company in action, transacting business. It is probably doing it on more hopeful lines than anywhere else on our western rivers. In other words, they have arrangements whereby they receive shipments on railroad sidings, transfer them to boats, and transport them over this stretch of the river, and deliver them on cars or railroad sidings at the other end of the route. They are handling that in a thoroughly efficient and businesslike way.

Mr. FREAR. That is at the present time?

Col. NEWCOMER. Yes.

Mr. FREAR. But it is a very small commerce?

Col. NEWCOMER. It is a small commerce. Of course, they can not carry a big commerce until we get a better channel, but they have begun this business on the promise that if they did put their money in it, Congress would go ahead and do the work.

Mr. FREAR. Has the channel been completed above Kansas City or Sioux City?

Col. NEWCOMER. There has been practically no work above, except isolated bits of revetment that were put in.

Mr. FREAR. Was it once cleared up according to the original project? Has it ever been completed according to the original project?

Col. NEWCOMER. There has never been any project there, except for snagging. We have never had any definite project depth adopted there.

The CHAIRMAN. The next item is:

San Diego, Los Angeles, and San Luis Obispo Harbors, California: For maintenance, \$45,000; completing improvement of San Diego Harbor by dredging area "A" in accordance with the project submitted on page fourteen of House Document Numbered Six hundred and forty-eight, Sixty-fourth Congress, first session, as modified in the report printed in Rivers and Harbors Committee Document Numbered Eight, Sixty-fourth Congress, second session, \$85,000; for improvement of Los Angeles Harbor in accordance with the report submitted in House Document Numbered Eight hundred and ninety-six, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$50,000: *Provided*, That no expense shall be incurred by the United States for acquiring any lands required for the purpose of this improvement; in all, \$180,000. Such modifications as may be recommended by the Chief of Engineers and approved by the Secretary of War for the plan of silt diversion works adopted by the river and harbor act approved July twenty-seventh, nineteen hundred and sixteen, for the protection of Los Angeles and Long Beach Harbors, in accordance with the report printed in House Document Numbered Four hundred and sixty-two, Sixty-fourth Congress, first session, is hereby authorized, subject to the conditions set forth in said document: *Provided*, That such modification shall not increase the total cost of the work.

Mr. KETTNER. Mr. Chairman, I would like to ask the Colonel the amount of money estimated for each harbor for maintenance mentioned in this item; that is for Los Angeles, San Diego, and San Luis Obispo Harbors?

Col. NEWCOMER. San Diego Harbor had an item of \$20,000 for maintenance, and Los Angeles Harbor, \$25,000, so that the \$45,000 here proposed is made up of those two items. San Luis Obispo had no item for maintenance required.

Mr. KETTNER. I might say, gentlemen, that there is a special recommendation sent in by the Secretary of War regarding the middle ground, but I do not wish to take that up now with the colonel. Of course, if that should go in, I ask the privilege of bringing it up later on. This is a very serious proposition, as we see it.

Col. NEWCOMER. I can state that in his report to Congress, made in accordance with its directions, to determine what works of improvement are needed for the fleet of defense, an item was included for San Diego Harbor and consists of widening out the channel on the middle ground, at a cost, I think, of something like \$69,000. We did not include that item, or the one, for instance, for Norfolk Harbor, because we considered the improvement in each case to be required merely for naval purposes, and it was doubtful whether it should be provided in such cases in the river and harbor bill. Mr. Kittner has brought it to my attention that it may also affect the commercial use of that channel, on account of the way this shoal makes out immediately opposite the coaling pier, and that interferes with the naval vessels when coaling there. I have made a note on that, to look it up, to see what the present situation is with reference to our project, and so I have nothing further to say at this time. Of course, it has been recommended to Congress that this other work should be done, but whether it should be in the river and harbor bill is a different proposition.

Mr. KETTNER. Mr. Chairman, I would like to ask the same privilege that was accorded Mr. Booher and Mr. Gray, regarding this recommendation that was made by the local engineer opposite the coaling wharf at San Diego Harbor.

The CHAIRMAN. I suppose Mr. Kettner has explained what he has in mind. Without objection Col. Newcomer will be requested to

take that up with the Chief of Engineers, with a view to ascertaining whether it constitutes any emergency, and I am sure Mr. Kettner has it in mind, that in the event it should not be decided upon as practicable, he will wish probably a new survey, the authorization for a survey there by the next session.

The next item is:

San Francisco, Oakland, Richmond, Monterey, and Humboldt Harbors, Redwood, San Rafael, and Petaluma Creeks, Napa River, San Pablo Bay, and Suisun Channel, California: For maintenance, \$287,500; continuing improvement of Oakland Harbor, \$92,000: *Provided*, That if in the judgment of the Secretary of War the prices received in response to advertisement for bids for dredging are not reasonable, so much of the amount herein appropriated as shall be necessary may be expended for the purchase or construction of a suitable dredging plant; for improvement of Richmond Harbor in accordance with the report submitted in House Document Numbered Five hundred and fifteen, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$100,000; continuing improvement of Humboldt Harbor and Bay, \$190,500; In all, \$670,000.

The next item is:

Sacramento, Feather, San Joaquin, and Mokelumne Rivers and Stockton and Mormon Channels (diverting canal), California: For maintenance, \$51,000.

The next item is:

Coquille, Coos, Sluslaw, and Yaquina Rivers, Coos, Tillamook, and Nehalem Bays, Oregon: For maintenance \$34,000; continuing improvement of channel over the bar at Coos Bay, \$70,000; in all, \$104,000.

The next item is:

Cascades and Dalles-Cello Canals, Oregon, Columbia River and tributaries above Cello Falls to the mouth of Snake River, Oregon and Washington, and Snake River, Oregon, Washington, and Idaho: Continuing improvement and for maintenance, \$70 000.

The next item is:

Willamette River above Portland and at Willamette Falls, Yamhill and Clatskanie Rivers, Oregon, Cowlitz, Lewis, Lake, and Grays Rivers, and Skamokawa Creek, Washington: For maintenance, \$48,300; completing improvement of Willamette River around the Willamette Falls at Oregon City, Oregon, in accordance with the report submitted in House Document Numbered One thousand and sixty, Sixty-second Congress, third session, \$80,000; continuing improvement of Lewis River, including North and East Fork, \$13,500; in all, \$141,800.

Skamokawa Creek is to be stricken out.

The next item is:

Columbia and lower Willamette Rivers below Vancouver, Washington, and Portland, Oregon, and mouth of Columbia River, Oregon and Washington: Continuing improvement and for maintenance, \$1,285,000: *Provided*, That of the funds herein appropriated \$6,000, or so much thereof as may be necessary, may be expended in completing improvement at Cathlamet, Washington, in accordance with the report submitted in House Document Numbered One hundred and twenty, Sixty-third Congress, first session.

The next item is:

Willapa River and Harbor, Grays Harbor, Chehalis and Hoquiam Rivers, Washington: For maintenance, \$7,500; for improvement of Grays Harbor in accordance with the report submitted in House Document Numbered Seventeen hundred and twenty-nine, Sixty-fourth Congress, second session, \$85,000: *Provided*, That pending the construction of the new dredge authorized any other Government dredge that may be available may be used for the deepening and maintenance of the bar channel; in all, \$92,500.

The next item is:

Puget Sound and its tributary waters, Olympia, Tacoma, Anacortes, and Bellingham Harbors, Lake Washington Ship Canal, Snohomish and Skagit Rivers, Swinomish Slough, waterway connecting Port Townsend Bay and Oak Bay, Columbia River between Wenatchee and Kettle Falls, Washington: For maintenance, \$30,000; for improvement of Lake Washington Ship Canal in accordance with the report submitted in House Document Numbered Eight hundred, Sixty-fourth Congress, first session, \$200,000; in all, \$230,000.

The CHAIRMAN. Strike out Anacortes.

Col. NEWCOMER. Strike out Anacortes. That name was left in by error.

Mr. HULBERT. Colonel, practically all of these new projects for Oregon and Washington which were included in the old bill have been included in this one, have they not?

Col. NEWCOMER. There have been several left out.

Mr. DUPRÉ. Skagit River is in this item, is it not?

Col. NEWCOMER. Yes; but there is a new project in the bill which has been left out.

The CHAIRMAN. The next item is:

Nome Harbor and Apoon mouth of Yukon River, Alaska: Completing improvement of Apoon mouth of Yukon River in accordance with the report submitted in House Document Numbered Nine hundred and ninety-one, Sixty-third Congress, first session, \$45,000; completing improvement of Nome Harbor in accordance with the report submitted in House Document Numbered Nine hundred and thirty-two, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$105,000; in all, \$150,000.

The next item is:

Honolulu, Kahului, and Hilo Harbors, Hawaii: For maintenance, \$10,000; for improvement of Honolulu Harbor in accordance with the report submitted in House Document Numbered Three hundred and ninety-two, Sixty-fourth Congress, first session, \$50,000; and the unexpended balances of appropriations heretofore made and authorized for the improvement of Honolulu Harbor, Hawaii, are hereby made available for improvement in accordance with the above-mentioned report: *Provided*, That if in the judgment of the Secretary of War the prices received in response to advertisement for bids for dredging are not reasonable, so much of the amount herein appropriated and authorized as shall be necessary may be expended for the purchase or construction of a suitable dredging plant; continuing improvement of Hilo Harbor, \$150,000; in all, \$210,000.

Mr. HULBERT. Mr. Chairman, I would like to ask Col. Newcomer what progress they are making on Hilo Harbor.

Col. NEWCOMER. I do not recall in detail now. The breakwater construction is well advanced and some dredging has been done, but just the situation I could not tell, without referring to the records.

Mr. HULBERT. They finally completed the quarry, did they not, and they are now getting rock?

Col. NEWCOMER. I think they are getting rock out, but, as I say, I would really have to refresh my memory on that. I have not had occasion to look it up lately.

The CHAIRMAN. The next item is:

San Juan Harbor, Porto Rico: For maintenance, \$10,000; for improvement in cooperation with the local government in accordance with the report submitted in House Document Numbered Eight hundred and sixty-five, Sixty-third Congress, second session, \$400,000; in all, \$410,000: *Provided*, That until \$600,000 of the amount expended on the dredging and reclamation work authorized herein is reimbursed, the Government of Porto Rico shall on the first day of July of each year after the completion of the work pay to the Government of the United States \$50,000.

Mr. BOOHER. What is the object of having Porto Rico pay this Government \$50,000. Is that for land?

Col. NEWCOMER. No, sir; the project proposed here for adoption is a project for extending the inner harbor area so as to provide more adequate space for the vessels, and the production of additional dock facilities, the present harbor being very much crowded. In connection with the extension there will be a considerable amount of land reclaimed, which will have a value, and it was thought, by reason of that value, created in that way, which will go to the local government of Porto Rico, that they should contribute toward the cost of the work. The cost of the work, if I recall now, is \$850,000.

Mr. GRAY. Is that \$50,000 to be continued?

Mr. KETTNER. Until the \$600,000 is paid.

Col. NEWCOMER. The first proposition was that the Secretary of War should reserve control over the disposition of that land that is so reclaimed, and provided that the rentals on account of leases that are paid and received by the Porto Rican government should be deposited to the credit of the United States as part reimbursement; but Gen. McIntyre, who has charge of the Insular Bureau, said he thought it would be a very much better proposition than that to have these regular payments made—a stipulated payment each year after the work is completed, extending over a considerable period of years—and, as we saw no objection to that, it was modified in this bill.

Mr. GRAY. Colonel, was the government of Porto Rico consulted at all about their willingness to do this?

Col. NEWCOMER. The officer in charge of the Insular Bureau—Gen. McIntyre—of course, has general control of it.

Mr. GRAY. Are the people down there willing to do that?

Col. NEWCOMER. Of course, when that proposition was taken up in the first place, the reimbursement question was taken up. This last phase of the matter—of putting it in the form of a stipulated sum each year rather than depositing the receipts from rentals—I do not think has been submitted to them, except through their representative here.

(Whereupon, at 5 o'clock p. m., the committee adjourned until tomorrow, Thursday, May 3, 1917, at 2 o'clock p. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Thursday, May 3, 1917.

The committee met at 2 o'clock p. m., Hon. John H. Small (chairman) presiding.

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

The CHAIRMAN. Gentlemen, at the conclusion of the meeting on yesterday the committee had completed down to the bottom of page 26 and the top of page 27, the last item of recommendations for appropriations; and during the consideration of the recommendations contained in this tentative bill certain items were referred back to Col. Newcomer for further consideration, with a view to determining and

reporting whether the War Department desired to make any modification of their original recommendations; and if Col. Newcomer is now ready the committee would be glad to hear from him in such order as he may think proper to present the matter.

Col. NEWCOMER. I may state that in addition to certain particular items that were brought to my attention yesterday with a view to further investigation, another very important fact developed yesterday which would affect some of the items as recommended by the Chief of Engineers. In discussing one of the items that came up yesterday, San Diego Harbor, it developed that the Chief of Engineers had thought that the bill as submitted to the Secretary of War and by him to Mr. Small made provision for the additional improvements required for the operations of the fleet of defense, to which we have referred several times before. That is the report contained in Senate Document No. 3, Sixty-fifth Congress, first session. When he learned that only the East River had been included, because it was in before, he said we ought to, by all means, put all of them in the recommendation of the department, and I have, in the brief time which I have had, prepared certain changes in the phraseology of the bill to provide for those additional items, and I think possibly it would be just as well to begin with the first change, which would be on page 8, and take them up in order throughout the bill.

This is for Norfolk Harbor. The bill as printed provides for additional improvement at Norfolk Harbor, and it was that fact, to a certain extent, which gave the Chief of Engineers the impression which he had that you were providing for all the work that was proposed there. The work which is included in the bill is simply an item that was in the bill before, and an item which has been recommended for several years as a commercial need. In Senate Document No. 3 the further work required for the needs of the Navy is set forth very briefly. The existing project for Norfolk Harbor is a 85-foot project with 400-foot channels. The additional improvement proposed in the bill as printed was to widen those channels to 600 feet and provide certain anchorage areas. Now, the Navy wants 40 feet to the navy yard and a minimum width of 750 feet in the approach. As a matter of fact, we can get 750 feet over a portion of the approach only. The part near the navy yard is limited by the physical situation to 450 feet; but with the greater width outside, we think they can probably get along with that.

On page 5 of the Senate document, about the middle of the page, you will find the situation at Norfolk set forth briefly. Three estimates were prepared. The district officer first thought that a width of 500 feet in the approach channel would probably be sufficient, and an estimate on that basis was prepared amounting to \$2,937,000. His attention was drawn to the fact that the Navy wished, at least ultimately, provision, in connection with this improvement, for 750 feet, and therefore Item B was prepared, which provides for that at a cost of \$4,039,000. Then another estimate was made giving a still wider channel in the outer bay, 1,000 feet, amounting to \$5,980,000. Item B, as I understand it, is the one the Navy wishes adopted, and in order to start that improvement and provide as much as we could well use for the next year, until another bill, I suggest

this modification in the item for Norfolk Harbor and Channels, Va., page 8, line 21, strike out "\$360,000" and insert:

And in accordance with the report submitted in Senate document Numbered 3, Sixty-fifth Congress, first session, item B, page 5, \$900,000.

Changing \$360,000 to \$900,000; in other words, adding \$540,000.

I might interject a remark at this point which will possibly ease the minds of the members of the committee to some extent by stating that the additional items which will be recommended amount to \$971,000; but, by good fortune, I can recommend a reduction of \$975,000 in another item, which has just come to my knowledge, the improvement at the mouth of the Columbia River, which involves the jetty work, and for which there was an estimate here of \$975,000 for bringing it to completion. I have just had a report from the district officer showing that that work should be suspended, apparently, at this time, on account of the great cost involved and the fact that the jetty has now been brought up to what they consider a fair grade for several years, so that the estimate that has been proposed for that item can be reduced by that amount, and the changes that will be recommended will leave the total in the bill substantially as it was before.

Mr. GALLAGHER. Did the last bill which we reported to Congress contain that item of \$975,000?

Col. NEWCOMER. It did; yes, sir.

The next item is on page 14.

Mr. COSTELLO. How much are you going to reduce that item? Where is the Columbia River proposition in the bill?

Col. NEWCOMER. You will find that on page 24.

Mr. KETTNER. Suppose we take up next the item on page 14, because we will come to the other item in regular order.

Mr. COSTELLO. Yes.

Col. NEWCOMER. I will come to that item later.

On page 14 we have the item for Mobile Harbor and bar. That matter was discussed this morning with the Chief of Engineers and Mr. Gray; and the Chief of Engineers desires me to make this recommendation to the committee: He says that he does not see his way clear to increase the amount in the bill by providing a greater sum than that proposed here for the new project, but he does think it would be advisable to include an authorization for a new project. In other words, make the sum that is here appropriated available for improvement and maintenance in accordance with that new project, so that hereafter the department can submit its estimates to Congress for work in accordance with the project; and, moreover, the operations of the dredges used there for maintenance can be applied, in so far as the funds will permit, toward providing the greater depth, looking toward a 30-foot project as compared with a 27-foot project, so that the change of wording recommended there is this:

After line 4 add:

"For maintenance of channel connecting Mobile Bay and Mississippi Sound, \$5,000; for improvement and maintenance of Mobile Harbor and bar, in accordance with the report submitted in House Document Numbered Seventeen hundred and sixty-three, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$110,000; in all, \$115,000."

That statement, if approved by the committee and adopted by Congress, would adopt the new 30-foot project. That, of course, does not involve a change in the appropriation.

The CHAIRMAN. That adopts the new project.

Mr. SCULLY. It commits the Government to the project?

Col. NEWCOMER. Yes.

Mr. COSTELLO. And allows the expenditure of \$110,000 on it at this time?

Col. NEWCOMER. Yes, sir; including maintenance.

Mr. GALLAGHER. What will the total improvement cost?

Col. NEWCOMER. My impression is it is a little over \$1,000,000; between ten and eleven hundred thousand dollars, if I recall correctly.

The next item is on page 15, and it is the Lake Pontchartrain item. We wired the district officer concerning the limitations under which we were framing this bill with reference to the adoption of new projects—those required for military necessities—and he wired his opinion that the improvement of Lake Pontchartrain in accordance with the project which was in the bill as passed before but stricken out by us is considered a military necessity. It appears that there are shipyards on Lake Pontchartrain which are building boats, and it is undoubtedly the prime necessity of the Government now to furnish boats as rapidly as possible for the seagoing trade. These are boats that carry from 1,500 to 2,500 tons, and we think the small amount involved in that project, \$32,000, is undoubtedly a desirable thing. We did not know that situation when we acted upon this bill. We simply assumed it was the old situation, and it was then a question of getting out the lumber barges for the carrying of lumber from Lake Pontchartrain to the Mississippi Sound and to the different lumber ports; but with this additional urgency for getting out new seagoing boats we think it ought to be included.

Mr. GALLAGHER. You are referring to the \$4,000 item?

Col. NEWCOMER. No, sir; \$32,000. We propose adding, on page 15, line 19, after \$4,000, and after putting a semicolon instead of a period, the words—

For completing improvement of Lake Pontchartrain, in accordance with the report submitted in House Document Numbered One hundred and seventy-six, Sixty-third Congress, first session, \$32,000; in all, \$36,000.

The CHAIRMAN. The representation has been made regarding the Lake Pontchartrain improvement and the existence of the shipbuilding plants there; that their value is enhanced by reason of their nearness to the necessary supply of lumber.

Col. NEWCOMER. That is very true. Lake Pontchartrain is a favorable locality for building and launching these boats and for getting the material, etc. Of course it is very convenient to New Orleans as a labor center, and we now consider that this is really a very essential item.

On page 22 is the next item, which is the San Diego item. This is another of the items in Senate Document No. 3, and is the one given on page 5, near the bottom of the page. The proposition, as we understand it, is that the Navy wants the channel across the middle ground inside the bay deepened from 32 to 35 feet. The estimated cost of that is \$69,000, and in order to provide for it the Chief of

Engineers recommends that there be inserted, in line 5, after "San Diego Harbor":

In accordance with the report submitted in Senate Document Numbered Three, Sixty-fifth Congress, first session, and—

Then it would proceed with the text, "by dredging area A," and so on. In other words, it puts in both of these documents and changes the amount in the tenth line from \$85,000 to \$154,000.

The CHAIRMAN. That is \$85,000 plus \$69,000?

Col. NEWCOMER. Yes; and, of course, the amount in line 17 is increased \$69,000, from \$180,000 to \$249,000.

The next item is on page 23, with reference to San Pablo Bay and Mare Island Strait. In this case the Navy states that they want a channel of 35 feet to the Mare Island Navy Yard if the navy yard is not relocated in San Francisco Bay. I understand that that proposition has not been decided. The inquiry I made to-day brought forth the fact that the commission which was sent out to investigate this matter has recommended that the navy yard be retained where it is on its present status, and that a yard with deeper facilities be located on the bay, possibly at Hunters Point or elsewhere. Therefore if that recommendation were to be adopted no further improvement would be needed. We have now 30 feet; but if they retain the navy yard there and want to get deeper water, in order to get them 35 feet, the estimated cost is \$661,000. Now, in order to provide for the contingency of their requiring 35 feet at Mare Island, this change is recommended:

Line 5, page 23, after "San Pablo Bay." insert:
"Mare Island Strait"—

So as to get the locality in the title.

Mr. COSTELLO. Are they going to abandon Mare Island?

Col. NEWCOMER. As I say, that proposition has not been settled yet. They do not propose to abandon it entirely, but they may, or may not, want additional depth. They propose to maintain the Mare Island Navy Yard with its present depth if they get another station down in the bay. If they do not get that station, it will be necessary to deepen it to 35 feet.

Mr. COSTELLO. Will this expenditure be subject to a decision of that question?

Col. NEWCOMER. That is the way I propose to introduce the phraseology.

In lines 17 and 18 strike out "in all, \$670,000" and substitute the following:

For improvement of San Pablo Bay and Mare Island Strait, in accordance with the report submitted in Senate Document Numbered Three, Sixty-fifth Congress, first session, if required for naval needs, \$330,000—

That is about one-half the total amount, and probably all they could expend in one year—

in all, \$1,000,000.

In other words, the new total for that item would be \$1,000,000.

Mr. FREAR. Have you discussed this San Francisco paragraph?

Col. NEWCOMER. Yes; we discussed that yesterday.

Mr. FREAR. Have you discussed the Richmond Harbor project?

The CHAIRMAN. Yes; we went over that yesterday.

Mr. FREAR. May I ask some questions in regard to those items? I did not know that you had passed them.

The CHAIRMAN. Yes; we will come back to that after a while. Suppose we let Col. Newcomer finish the statement he is now making.

Mr. FREAR. That makes a total of \$1,000,000.

Col. NEWCOMER. That makes a total of \$1,000,000 for this item with the change indicated.

On page 24 is the item where we get the reduction. In line 19 the amount there stated, \$1,285,000, should be changed to \$310,000, omitting \$975,000 from the mouth of the Columbia River on account of the conditions there.

Mr. DUPRÉ. Colonel, it might be well for you to restate just at this juncture the reasons that justify that conclusion.

Col. NEWCOMER. A report has just been received from the district officer stating that he does not consider it advisable under existing conditions to continue the work on the jetties on account of the increased cost and the difficulty of getting labor. He thinks the work should be discontinued for several years. The work so far done has brought the jetty throughout practically its entire length well above high tide. There is a portion at the end that the storms of last winter reduced somewhat, and there is a very deep hole washed around the end of the jetty, as usually occur in these cases, so that any extension would be very expensive at this time, and he suggests, therefore, a discontinuance of any work on the north jetty for at least one year, and he says if that is done the amount estimated to carry that forward for the year can be omitted. He has a balance of funds on hand sufficient to keep the dredge at work which has to be operated on the bar.

The CHAIRMAN. Resulting in a reduction of \$975,000, and leaving the amount to be appropriated \$310,000?

Col. NEWCOMER. Yes, sir. These changes, if made as suggested, would give a net reduction of \$4,000 in the total carried by the bill.

Mr. DUPRÉ. Which was what, originally?

Col. NEWCOMER. \$26,897,000. That, I believe explains all the modifications except Lake Contrary. That I did not mention because I did not have any change to present. I presented to the Chief of Engineers the matter of the additional work desired at Lake Contrary, just below St. Joseph on the Missouri River, which involves an appropriation of \$25,000 mainly to close the gap between the revetment that has recently been put in and the revetment above so as to make secure the work just done at Government and local expense at a cost of \$125,000, and the Chief of Engineers stated that in his opinion he did not feel justified in recommending that appropriation at this time for several reasons. The first reason was the one stated yesterday, that it was not considered of great urgency as a commercial matter or as a military need of any kind, and he thought it could be taken care of as a question of saving Government property in this way: We have on hand a balance of about \$1,000,000 from the lump-sum appropriations which were made subject to allotment by the Secretary of War. We have been holding and guarding it very carefully recently for fear there would not be any river or harbor bill, in which case, of course, it would be necessary to devote that largely to taking care of Government plan and necessary expenses of supervision where the works would have no fund provided

by Congress. But if this river and harbor bill passes, then there will be a fund available from which any necessary amount could be allotted in order to protect the Government work. I may state also that we wired the district officer in December as to the necessity for closing this gap, and we got the response that it was not needed unless the head of the revetment should be damaged by this spring's flood. I have not any later information.

Mr. BOOHER. That is what I told you yesterday. The danger is from cutting in behind.

Col. NEWCOMER. As a rule on these revetments, while the process of destruction varies in rapidity in different cases, as a rule it is a gradual process, and if the head of the revetment is attacked by caving there, in the first place, we have the general emergency appropriation from which an allotment of not exceeding \$10,000 could be made, and then, as I say, we have also this other balance of \$1,000,000, subject to allotment.

Mr. BOOHER. What language do you propose to insert in the bill that would authorize the use of that money? The present language would hardly be sufficient.

Col. NEWCOMER. I do not think we need any language at all in the bill. The work has been approved and the allotment could be made by the Secretary of War without any further authorization of Congress.

Mr. BOOHER. But if you want to begin that work and go to the department to get the money, will there not be the objection raised that there is no law authorizing the appropriation from the lump sum for that place?

Col. NEWCOMER. The lump-sum appropriation was made available for such river and harbor projects as had been authorized and started.

Mr. BOOHER. But this work was not started when that was done, and they did not have this work in mind.

Col. NEWCOMER. When was this work started?

Mr. BOOHER. They are still working at it, the lower end of it; that is, they have gotten the most of it completed, but there is some finishing work to be done.

Mr. SWITZER. Could the Secretary of War realloit it?

Col. NEWCOMER. He has the authority, as I understand it, to allot that money to approved projects as the status of the work may require anywhere in the country.

Mr. DUPRÉ. The point Mr. Booher is making is that the project was authorized in a bill subsequently—

Mr. BOOHER (interposing). The money was appropriated; \$75,000 has been appropriated for years, but the people have never been able to raise their part of the money. The project itself was adopted in 1908.

Col. NEWCOMER. I do not think there is any question about that at all.

Mr. BOOHER. As I say, it was authorized back in 1908, and we have each year appropriated \$75,000 for it since I have been here, in accordance with document so and so. Now, if that is the case, and the money in this lump sum could be allotted by the Secretary of War to any other fund or work, I do not care about having anything in the bill, except that I would like to be in a position to explain the matter to the people who are interested in it. If there could be some

language put in the bill that would in a way protect me from having to explain the matter to a thousand people, I would like to have it done.

Mr. FREAR. May I make an inquiry at this point?

Mr. BOOHER. Please wait until we get through with this one.

The CHAIRMAN. Judge Booher is discussing with Col. Newcomer the matter of an item which was contained in the last bill for the Missouri River near St. Joseph.

Col. NEWCOMER. As a matter of fact, was that item in the last bill? Mr. Brooker could tell.

Mr. KETTNER. Yes; it was in the last bill that was reported.

Mr. BOOHER. It was carried in the bill before. There was \$75,000 carried for it in the 1916 bill. I know that it was in the bill that did not pass.

Col. NEWCOMER. If the 1916 act did not modify the status of the project any, but simply provided for the completion of the project, then I do not think there is any question whatever but that the lump-sum appropriation would be available for it.

Mr. BOOHER. Could you not recommend some language to be put in there showing that the appropriation may be taken from this lump sum?

Col. NEWCOMER. It would be unusual to put something of that kind in the bill simply as a matter of information to the persons concerned.

Mr. BOOHER. Of course every one of them will want to know what was done.

Col. NEWCOMER. I think that could be done by a letter from the department. Of course I have not thought of any language to insert in the bill.

Mr. BOOHER. Your opinion is that if the river begins damaging the upper end of the new work the money could be taken from the lump sum carried in the bill of 1915 without making a specific appropriation?

Col. NEWCOMER. Exactly.

Mr. BOOHER. And enough of it could be taken to protect it?

Col. NEWCOMER. Yes, sir; we will have that in the record.

The CHAIRMAN. Colonel, have you completed your statement on the matters that have been referred to as comprising the modifications of your original recommendations?

Col. NEWCOMER. Yes, sir; I believe that all of them have been mentioned.

Mr. FREAR. I understood that you had reduced the appropriation for the Columbia River, on page 24, from \$1,285,000 down to \$310,000?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. How did you happen to make that estimate of \$1,285,000 that appears in the bill?

Col. NEWCOMER. That was made to provide for additional jetty work on the north jetty at the mouth of the Columbia River. It was estimated that \$975,000 would be required to complete that work and to do certain work of maintenance during this year.

Mr. FREAR. You believed that that was an emergency matter and that it was a necessary expenditure at this time, did you not?

Col. NEWCOMER. From the information we had from the district officer we considered that it was desirable.

Mr. FREAR. And you arbitrarily reduced that estimate by \$975,000 just on his statement?

Col. NEWCOMER. Yes, sir; on his statement, not arbitrarily.

Mr. FREAR. That is the only information you had?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. I wanted to inquire what method was followed in making changes in the estimates.

Col. NEWCOMER. It was done on information furnished by the district officer.

Mr. FREAR. You did this from information from the district officer, and you have not consulted with any one else as to its necessity?

Col. NEWCOMER. No, sir. The district officer is the one who is most familiar with the work.

Mr. FREAR. Referring to the item for Richmond Harbor, on page 23, what is the total amount to be expended there?

Col. NEWCOMER. It is my impression that it is about \$428,000.

Mr. FREAR. What is that included for? Is that a matter of preparedness or of commercial necessity?

Col. NEWCOMER. That is a part of the commercial necessity. That is the terminus for one of the transcontinental lines, the Santa Fe, and there is a very extensive commerce seeking outlet there.

Mr. FREAR. Right at that point. You said it was seeking an outlet—what is your reason for making that statement?

Col. NEWCOMER. The information, all of which has been embodied in this document—

Mr. FREAR (interposing). You have examined that project personally?

Col. NEWCOMER. Yes, sir. The locality there has already spent large sums in preparation for this harbor improvement, in building terminals, wharves, etc. The locality is to pay one-half of the cost of this item of improvement.

Mr. FREAR. But they get a great deal of land by that proposition, do they not? They get a good deal of land on a real estate project, do they not?

Col. NEWCOMER. I think there is some, but it is not a great deal.

Mr. FREAR. I have examined that project myself, and so I have some information about it. They have a wharf there at present, where there is no traffic whatsoever. There is a wharf there at present, and this traffic of which you speak is carried on trains to-day, is it not, over to San Francisco by ferries? Is there any traffic whatsoever from Richmond Harbor by means of any wharf at that point?

Col. NEWCOMER. Yes, sir; there is a very considerable traffic now, running over 500,000 tons, which, however, does not come from this particular part of the Richmond front. They have some wharves there farther up the bay, where they now have sufficient water, from which they carry a considerable commerce.

Mr. FREAR. You said 500,000 tons?

Col. NEWCOMER. I think fully that much; yes, sir. They have not only the Santa Fe Wharf there, but the principal one, the Standard Oil Co.—

Mr. FREAR (interposing). Does the Standard Oil Co. ship any of its products over the water now?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Are you sure of that?

Col. NEWCOMER. Yes, sir. Now, there has been a wharf built there by the locality. I am talking about the wharf that the city built below, which forms a part of this project. They built that on the supposition that the Government would carry out this project.

Mr. FREAR. That is a very shallow place, is it not, for a harbor?

Col. NEWCOMER. It is comparatively shallow.

Mr. FREAR. What is the depth of the water near there?

Col. NEWCOMER. I think it is possibly not more than 8 or 10 feet. You know the eastern side of San Francisco Bay slopes out very gradually from the shore. In some places, as here, it is not so gradual, but down farther, on the Berkeley front and the Oakland front, we have to go out a couple of miles before we get to a depth of, say, 15 or 16 feet. The deep water is closer to the shore here, but it is necessary to excavate a channel and basin.

Mr. FREAR. And that is the reason why the engineers have placed that in this bill, because it is a new project. It is simply a commercial project and not in any sense urged on account of preparedness.

Col. NEWCOMER. It is a commercial project in the sense that it affords a good outlet for that interior territory in the San Joaquin and Sacramento Valleys, which are great food-producing areas, and this, of course, would make an available point of shipment for the products of those valleys.

Mr. FREAR. I will now ask you about Mobile Harbor. I was not here when that was taken up.

Mr. GALLAGHER. Where they propose to build this new wharf is on shallow water, is it not?

Col. NEWCOMER. I think so.

Mr. FREAR. Let me say in connection with that matter that the gentlemen who took me all over that project stated that it was a real estate project, pure and simple. He was one of the leading men of the place. So there is some doubt expressed about it even there in Richmond.

Mr. KETTNER. In answer to what Mr. Frear has said, I will try and call his attention to some facts. Mr. Frear, I think you were with us at the time we had lunch——

Mr. FREAR. No; I was not there.

Mr. KETTNER. Now, that is where the pier from which the Standard Oil would make shipments is located. As Col. Newcomer stated they will make large shipments. Now, in regard to the statement that some of the people there did not believe in the project, I would say that they voted \$400,000 in bonds and they will make this improvement. The bonds carried by a vote, I think, of about 4½ to 1. Therefore, the people there must be in favor of the improvement, and it is a "fifty-fifty" proposition.

Mr. FREAR. Let me say, in response to that, that so far as the Standard Oil Co. is concerned, I am quite well satisfied from the investigations I made there that they are not favoring this project, and I will say that one of the leading members of that concern was one of the gentlemen who showed me around. I was not acquainted with him before I went there. There were some other leading men of California who took me over that project at the time, and they had no object in it except to acquaint me with the facts. Now,

if this is for the accommodation of the Standard Oil Co., I would like to see testimony in the record to show that the Standard Oil Co. has ever asked for it or indorsed it.

Col. NEWCOMER. In response to that statement, I will say that the Standard Oil Co. is not affected by this project except in the matter of the taxes that they will have to pay on account of the bonds that have been issued. I might state this, also, that I was just informed by Mr. Curry, the other day, that the Standard Oil people were in favor of this proposition, although they have a wharf that will serve their needs, and that they are willing to bear their proportionate part of the burden of taxation. I might state, further, that this proposition really involves two parts. There is an outer harbor and an inner harbor. The outer harbor is what I had in mind at first, because it is the most important—

Mr. FREAR (interposing). Does this include both the outer and inner harbors?

Col. NEWCOMER. I will see. I am not quite certain.

Mr. FREAR. This is for the improvement of Richmond Harbor.

Col. NEWCOMER. The project document referred to in the bill does include the outer channel and then the channel to the slough. Now, the outer harbor project involves a slight reclamation of land because of the fact that in order to straighten the harbor line a bulkhead has to be built, but that reclaimed land will be largely used for wharf purposes, that is, municipal wharf purposes. There is no other land reclamation there that I can see. This is right opposite the bluff, and the coast line there is very abrupt. Now, in connection with the inner harbor development, leading up to the slough, as I understand it, that will probably involve the reclamation of quite a large area of land. That, of course, has a considerable value from the real estate aspect, but I do not think that the other part has.

Mr. FREAR. It would apply more particularly to the inner harbor?

Col. NEWCOMER. Yes, sir.

Mr. KETTNER. Is it not a fact that those lands go to the city and not to individuals?

Mr. FREAR. Those reclaimed in the outer harbor do, and that was one of the reasons why they voted so largely for the bond issue, because they thought that that would give them something back.

Mr. OSBORNE. I would like to ask Col. Newcomer a question or two. The point to which you referred is the San Francisco terminus of the Santa Fe Railroad system, is it not?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. And it is also the terminus of a pipe line for oil reaching down to the oil regions, 250 miles south?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. Is the oil supply situation one of great importance?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. Is it not a fact that that fuel oil is used largely by the United States Navy?

Col. NEWCOMER. That is true; yes, sir.

Mr. OSBORNE. And that, of course, has a national importance?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. I would like, Mr. Chairman, after we leave this discussion, to say something about one or two other items.

Mr. FREAR. I want to ask you some questions in regard to the Mobile Harbor. As I understand it, you have adopted a project there requiring the expenditure of \$1,000,000. Is that right?

Col. NEWCOMER. A change in the wording has been suggested which, if approved, would mean the adoption of a new project which involves ultimately the expenditure of something like \$1,000,000.

Mr. FREAR. Have you reported on that?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. But it is not included in this bill?

Col. NEWCOMER. No, sir.

Mr. FREAR. Where is the report on that?

Col. NEWCOMER. It is in House Document 1763, Sixty-fourth Congress, second session.

Mr. FREAR. What is the purpose of that?

Col. NEWCOMER. It increases the project depth.

Mr. FREAR. What is the depth now?

Col. NEWCOMER. The present project depth is 27 feet, and we propose to increase it to 30 feet.

Mr. FREAR. That was the project that was discussed yesterday when a comparison was made with the project at Tampa?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What is the increase provided?

Col. NEWCOMER. Three feet.

Mr. FREAR. Is that considered as a commercial or preparedness proposition?

Col. NEWCOMER. No money is appropriated for it. No additional money is appropriated for it at this time.

Mr. HULBERT. That would make a depth of 30 feet in that harbor?

Col. NEWCOMER. On the facts as reported—

Mr. HULBERT (interposing). That is the object of it?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That is to cost \$1,000,000?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Is that a preparedness or commercial proposition?

Col. NEWCOMER. As I explained before, the Chief of Engineers was not willing to recommend any increase in the appropriation for Mobile at this time. He thought that the facts did not justify such increase as a matter of urgency, either in a military or commercial sense, but he was willing to recommend the adoption of the project so that in the future the annual estimates can be based upon that project.

Mr. FREAR. He recommends the new project on the ground of commercial necessity?

Col. NEWCOMER. Yes, sir; I suppose you might say that.

Mr. DUPRÉ. Colonel, did I also understand you to say that it would be possible for you to utilize some of this \$110,000 on that new project if the conditions permitted? You segregated the two propositions, and you had \$5,000 for maintenance and \$110,000—

Col. NEWCOMER (interposing). \$5,000 was for the maintenance of one of the other items in the group; \$110,000 was estimated for the maintenance of Mobile Harbor.

Mr. DUPRÉ. Was that made applicable to the new project, if conditions permitted?

Col. NEWCOMER. Yes, sir. The work is being done by Government dredges.

Mr. OSBORNE. I was not here yesterday when those items relating to Los Angeles Harbor were reached on page 22, and I do not know whether there were any questions asked in regard to them or not. I call attention to this item in the bill:

Such modifications as may be recommended by the Chief of Engineers and approved by the Secretary of War for the plan of silt diversion works adopted by the river and harbor act approved July twenty-seventh, nineteen hundred and sixteen, for the protection of Los Angeles and Long Beach Harbors, in accordance with the report printed in House Document Numbered Four hundred and sixty-two, Sixty-fourth Congress, first session, is hereby authorized—

And so forth.

I want to say that recently, within the last month, Los Angeles County voted \$1,500,000 for flood control, and \$1,085,000 of that was for the purpose of taking care of this silt diversion. This item there is simply to permit a new place of exit into the ocean. Now, I notice that there have been a good many cuts made as between the old bill and this bill on the Pacific coast. It did not strike you that we were getting more than our share on the Pacific coast, did it?

Col. NEWCOMER. We did not—

Mr. OSBORNE (interposing). And I see now you have chopped out the Columbia River—

Col. NEWCOMER (interposing). It just happened—

Mr. OSBORNE (interposing). Of course, that is very pleasant to everybody except to the people in that part of the country.

Col. NEWCOMER. It just happened that way. Of course, the Chief of Engineers was going to recommend the insertion of this other item when he found out the situation, and we will recommend that, undoubtedly, irrespective of the effect on the bill. It just so happened that at that time we got a report recommending the suspension for next year of this work, which we had estimated would cost that sum. I do not think that there has been any special discrimination against the Pacific coast.

Mr. OSBORNE. We are a long way off, and are modest, anyway, and I fear that our modesty is expensive to our constituents out there.

Col. NEWCOMER. I think you will find by comparing the items that as many items, in proportion, have been retained on the Pacific coast as anywhere else. For instance, you have two new projects at San Diego, one new project at Los Angeles, a new project at Richmond, another one at San Pablo Bay and Mare Island Strait. Then, there is another one at the Lake Washington Ship Canal. Of course, we had no idea of making any geographical distribution of them.

Mr. OSBORNE. Is that estimate of \$371,000 for Humboldt Harbor and Bay retained?

Col. NEWCOMER. Yes, sir; separated for maintenance and for improvement or new work.

Mr. OSBORNE. And the item for \$200,000 for Crescent City Harbor is cut out?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. In response to that inquiry, would you say that the Pacific coast has had its share?

Col. NEWCOMER. I have not gone over it in that way, but my impression is that they have not been treated any worse than other sections.

Mr. DUPRÉ. Did you not disclaim any purpose of making a geographical distribution of the projects?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. I want to ask whether the item for Petaluma Creek and Napa River is retained?

Col. NEWCOMER. No, sir; that is cut out. For Petaluma Creek and Napa River something is retained for maintenance, but the new projects proposed for Petaluma Creek and Napa River, and also San Rafael Creek, were cut out.

Mr. SWITZER. There are immense timber resources around Crescent City, are there not?

Col. NEWCOMER. Yes, sir; that is very true, but we have felt all along that that project was only justified in connection with a railroad, and the railroad is not there yet.

Mr. GALLAGHER. Has not the railroad built piers there?

Col. NEWCOMER. No, sir. There has been some local lumber traffic.

Mr. SWITZER. There is no railroad at Crescent City. It is 100 miles from the railroad.

Mr. OSBORNE. You say that there is no railroad there and that it is the center of a great lumber region. Lumber will be required to meet the defense needs, and if you are considering the matter from the defensive standpoint you have a case there at Crescent City deserving of consideration by the committee and Congress.

Col. NEWCOMER. I might state that the Chief of Engineers in taking up these matters this morning mentioned the regret with which he cut out Crescent City Harbor. He is very much in favor of the project, but he did not feel that it was one that should be included at this time.

Mr. TREADWAY. I should like to ask the Colonel if any further consideration has been given to Boston?

Col. NEWCOMER. That has not been discussed with the Chief of Engineers any further. I did not understand that anybody requested that that be done.

Mr. TREADWAY. I brought it up the other day and asked for some explanation as to why it was taken out and it did not strike me that there was very much explanation offered on that item being removed from the present bill. It is a very important project and one that has been favorably considered. This bill is based on the Senate bill of last year, and I understand that the Chief of Engineers is very favorable to the project. I do not need to go over the various features of the reason why it seems to me that Boston is one of the important places that should be included in the bill. If it has not been given any further consideration, in view of the fact that other items have been presented here not incorporated in the printed form before us, I should strongly urge that Boston be given consideration here by the committee or by the Chief of Engineers or by both to bring about results.

The CHAIRMAN. In view of the suggestion made by Mr. Treadway without objection, Colonel, will you kindly give that reconsideration with the Chief of Engineers?

Col. NEWCOMER. I certainly will take it up. I did not understand that it was proposed to have the department reconsider its attitude in the matter. You simply asked the explanation, and I gave the

explanation of our attitude. Of course, if you wish to have it done, I will do it at the first opportunity.

Mr. TREADWAY. I did not ask for it at that time and you covered all I asked for, but I fully intended when the time came to take it up again. I realized that the attitude of the committee would be very largely influenced by the advice that the Chief of Engineers would give. There is no occasion for me to rehearse the situation. It has been debated in committee and on the floor of the last three or four Congresses and had everyone's approval last year. I am free to say that I was very much surprised the first time I glanced at the bill to find that it was not included as the other items were.

Mr. SWITZER. Permit me to say that as I understood it the request made of Col. Newcomer to look into all these items was made yesterday in your absence, Mr. Treadway.

Col. NEWCOMER. The suggestion was made that I should give them full consideration with the Chief of Engineers.

Mr. KETTNER. That is, the items included in Senate Document No. 3.

Mr. HULBERT. Not all of the items.

The CHAIRMAN. The colonel has noted the request, which will be taken as the request of the committee.

Mr. HULBERT. I want to inquire if the language on page 4, folios 6 to 9, was intended to adopt the \$13,000,000 project for the improvement of the East River?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. With this modification, of course, that across Diamond Reef the depth of 35 feet will be extended to 40 feet?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. In Senate Document No. 3, which is a report made upon a resolution introduced by Senator O'Gorman, of New York, in the last Congress, on page 4, I note this sentence:

North of Diamond Reef a channel of somewhat restricted width having a depth of 40 feet is now available throughout East River, except at Hell Gate.

So that this project, as modified by extending the depth at Diamond Reef to 40 feet, would give a restricted channel the entire length of the East River of 40 feet, except at Hell Gate?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. But the 40-foot channel would not have any better value for vessels which would require more than 35 feet than it has, if those vessels were to pass through Hell Gate, until Hell Gate has been deepened to 40 feet?

Col. NEWCOMER. That is right.

Mr. HULBERT. In this report the engineer gives the estimates for 40 and 35 foot channels, both practicable and commodious, on page 5?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. What is the objection to the adoption of a 40-foot project at Hell Gate, the same as you have adopted at Diamond Reef, without the appropriation of any additional sum of money, so that we will be in a position to have subsequent recommendation made to get 40-foot depth at Hell Gate, just as you have adopted the recommendation of 3 feet additional depth at Mobile, so that it will be possible in the future to recommend further appropriation to go to that depth in Mobile River.

Col. NEWCOMER. I do not know that there would be any objection, except this: We have not understood that the Navy was desirous at this time to go to more than 35 feet.

Mr. HULBERT. If there is no desire to go to 40 feet, you do not have to ask for the money; but if you adopt the project now to go to 40 feet at Hell Gate, the same as at Diamond Reef, then at any time that the Navy might ask for the necessary appropriation the project would be already authorized?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. We would thereby avoid the delay that might occur at any time when there would not be a bill reported with the new project in it?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Do you not regard the strategic value of the East River as providing the means of ingress and egress to and from the Brooklyn Navy Yard, and particularly in view of the fact that there are four bridges across the river, the demolition of any one of which might entirely block off the navy yard, as a sufficient justification for adopting at this time 40 feet at Hell Gate?

Col. NEWCOMER. It seems to me that 35 feet at Hell Gate is really adequate, for this reason: The depth of 35 feet, with 5 feet of tide, gives you practically 40 feet. The draft of our heaviest battleship contemplated is about 33 feet. It seems to me that 35 feet will answer. Of course, there would be a certain advantage in having access to the navy yard for a crippled vessel; but whether you would want to go to the very large expenditure that would be involved in the 40 feet all through Hell Gate in order to provide that facility, in addition to the other across Diamond Reef, I do not know. The Navy Department has not asked for it.

Mr. HULBERT. You do not go to the expense unless you ask for the money.

Col. NEWCOMER. I thought myself that we should wait to provide for that until they asked for it.

Mr. HULBERT. What objection can there be to making the authorized depth of the river uniform throughout its entire length, in view of the fact that when you have completed the Diamond Reef deepening you will then have 40 feet depth the entire length of the river except at Hell Gate?

Col. NEWCOMER. I do not see any objection.

Mr. HULBERT. But, of course, you will not get the additional 5 feet depth at Hell Gate unless the Chief of Engineers makes the recommendation?

Col. NEWCOMER. And Congress provides the money.

Mr. HULBERT. Is it not just as well, while you are providing 40-foot depth throughout the entire length, except at that point, that it be included, so that you will have the same depth throughout the entire length?

Col. NEWCOMER. The only objection I can see is the policy that has generally been observed by Congress and by the department in handling these improvements. The law prescribes that in passing upon these matters we shall recommend the improvement that is needed for the present or the immediately prospective needs. We have not in many cases gone to the depth that we anticipated might be re-

quired at some remote time in the future. I do not see any objection if Congress is willing to do it.

Mr. HULBERT. If the East River project which was adopted in 1868, 49 years ago, had contemplated the needs looking very much into the future and had provided, for instance, 35 feet authorization, although at that time it was only intended to go to 26 feet, and in all these years Congress has been in session and could have appropriated the money if they saw fit to do so, in all probability the channel would be far nearer 35 feet now than it is at present?

Col. NEWCOMER. That is quite likely.

Mr. HULBERT. As a matter of fact, at the present time at Third Street Reef there is only 19 feet, although the project adopted in 1868 called for 26 feet the entire length of the stream; at Pilgrim Rock only 13 feet depth; at Ferry Reef only 24 feet; at Heel Tap Rock 20.5 feet; at Frying Pan Reef 23.8 feet; at Middle Ground 15.6 feet; and in the channel between North and South Brother Islands only 19 feet.

Col. NEWCOMER. Those are not in the best depths of the channel.

Mr. HULBERT. I appreciate that, but we have more necessity for the depth on account of the commercial use than you have at Mobile or Hillsboro?

Col. NEWCOMER. For the main channel.

Mr. HULBERT. The approaches to the docks. Vessels do not anchor and discharge cargoes in the middle of the stream; they proceed to the docks if accessible.

Col. NEWCOMER. Outside of the channel there is very shallow water frequently.

Mr. HULBERT. There have been requests made to the dock commissioner of New York City for docking facilities for steamship lines that it is intended to establish between New York and points in South America, and the dock commissioner of the port of New York has not been able to provide the space for those lines because there is not the available space at the docks to which the boats of the intended lines can get access.

Col. NEWCOMER. That may be.

Mr. HULBERT. And that is due to the fact that there has not been any authorization or appropriation made in order to dredge out the approaches?

Col. NEWCOMER. I can not speak of that definitely. We would not ordinarily dredge out the approaches to the docks.

Mr. HULBERT. I brought to the attention of Col. Newcomer and the committee yesterday the situation with regard to the Harlem River. In looking up that matter further last evening I found, according to the engineer's report, that you have not completed the additional channel at Macombs Dam Bridge. They have only 12 feet of water in the south channel. Those channels are very narrow?

Col. NEWCOMER. Quite so.

Mr. HULBERT. And the tide runs particularly strong at that point?

Col. NEWCOMER. It does, at times.

Mr. HULBERT. At certain changes of the tide it is advantageous to take advantage of the north channel whereas at other stages of the tide it is necessary to take advantage of the south channel.

Col. NEWCOMER. I do not think that the tide makes any difference in the one to be used. One of them never has been used; they have only used one of them.

Mr. HULBERT. The other one has not been used, because it has not been accessible?

Col. NEWCOMER. Exactly.

Mr. HULBERT. Because it has not been dredged out?

Col. NEWCOMER. I do not think the question of the tide makes any difference. Of course, it would be desirable to have both openings available.

Mr. HULBERT. The water in the Harlem River has been said to run both ways, dependent on the tide?

Col. NEWCOMER. The tide does ebb and flow.

Mr. HULBERT. At the south end of the Harlem River there is a very strong current at high tide?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. And when the tide is running in they use one channel going in and the other out?

Col. NEWCOMER. I do not think the direction of the flow of the tide affects the use of one channel or the other at Macombs Dam Bridge. Of course, there may be some local condition affecting the matter that is not known to me.

The CHAIRMAN. Can you tell us the estimated cost of the 40-foot commodious channel through Hell Gate?

Col. NEWCOMER. A 40-foot commodious channel is estimated at \$30,000,000.

Mr. BOOHER. And what is the estimated cost of a 35-foot channel?

Col. NEWCOMER. A 35-foot commodious channel is estimated at \$8,917,000, which is a part of the \$13,000,000 project, which includes some other work besides the 35-foot channel.

Mr. HULBERT. The 40-foot recommendation contained in Senate Document No. 3 was compiled pursuant to this resolution of Senator O'Gorman, because it was conceived that it might be necessary?

Col. NEWCOMER. The original inquiry was started by that resolution, but, as a matter of fact, this report was made to Congress in compliance with the naval appropriation act.

Mr. HULBERT. The resolution was incorporated in the naval appropriation act?

Col. NEWCOMER. With certain changes; yes.

Mr. HULBERT. The act itself did not request specifically a report upon a 40-foot channel?

Col. NEWCOMER. No.

Mr. HULBERT. The Engineer Department of the War Department voluntarily suggested the 35 and 40 foot channels as being desirable?

Col. NEWCOMER. The General Board of the Navy Department did that.

Mr. HULBERT. On page 196 of the last report, it is stated with reference to Port Chester Harbor:

As the result of the improvement, transportation by water has been rendered easier and safer, while the draft and registered tonnage of the largest vessels entering the harbor has increased. The financial benefits to the locality are indicated by the amount saved through the use of water instead of rail transportation for coal, iron, cement, sand, gravel, stone, brick, and lumber. This saving amounted to about \$154,700 in 1915.

The funds available June 30, 1916, together with those appropriated by the river and harbor act of July 27, 1916, will be expended for dredging in the channel opposite and below steamboat wharf to remove the bar which obstructs the approach to the wharves on the east side of the river and for removing rock projecting into the channel in the vicinity of Fox Island. It is expected that this work will be commenced in the fall of 1916, and that the funds will be exhausted by May 1, 1917.

Can that work be completed with the amount appropriated in the last bill?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT (reading)—

The dredged channel between Fox Island is narrow and navigation through it is made difficult by sharp bends. At and above Fox Island the channel is narrowed by projecting ledges. These conditions should be remedied as soon as practicable.

Have you given any further consideration to the effect upon the commerce of that locality by the omission of the \$26,000 that was carried in the last bill that passed the House for continuing the improvement of that project?

Col. NEWCOMER. I do not think there has been any further consideration since we mentioned it the other day, when we first came to that item. That item was decided by the Chief of Engineers himself who had charge of the work up there and who is, of course, quite familiar with the locality. We have done some work, as indicated. The appropriation which was expected to complete certain work was not sufficient, and we made an additional allotment out of the lump-sum appropriation, because they ran into more expensive work than was expected. The situation is now better than it was before. I do not know anybody who questions the desirability of going ahead with the improvement as a general proposition, but the Chief of Engineers decided through his knowledge of the situation that it was not desirable to include the item at this time.

Mr. HULBERT. There is one other project. Do you know whether or not a considerable amount of commerce passing out of Newtown Creek on the East River has been intimately connected with the supplying of the demands of warfare?

Col. NEWCOMER. I have no doubt it may have been. I am not familiar with the details of the movement of traffic there.

Mr. HULBERT. The Nichols Chemical Co., one of the large industries there, shipped last year \$180,000,000 worth of chemical products much of which was used in warfare. Have you given any consideration to the congested condition which renders it almost impossible to move freight in and out of Newtown Creek with any expedition whatever?

Col. NEWCOMER. Yes, sir; we have.

Mr. HULBERT. But you have not felt that the exigencies of that case warranted the inclusion of that project in this bill?

Col. NEWCOMER. No, sir; practically all of the tonnage to-day on the creek, which is very large, is on barges and lighters and does not require any greater draft than we have there now.

Mr. HULBERT. What was the occasion for recommending the new project?

Col. NEWCOMER. It was in order to increase the channel dimensions, and permit a little easier movement. In fact, there was grave

doubt whether we should increase the depth. We did not increase the depth as much as proposed. If you increased the depth very much, the attempt to bring in the large ocean-going schooners would block up the channel for the passage of barges and lighters, which would be very serious. It was a question whether any additional depth should be given. We did recommend an increase of 2 feet in the depth, to 20 feet, I think, so as to bring in somewhat larger boats. They asked for 24 feet.

Mr. HULBERT. There was an offer made of local cooperation?

Col. NEWCOMER. No; I do not think there was any local cooperation.

Mr. HULBERT. I will refer you to the report.

Col. NEWCOMER. We recommended in the report that they be required to furnish the land; there was no cooperation offered in the cost of the improvement.

Mr. FREAR. What is the total amount carried in the bill now, \$26,900,000?

Col. NEWCOMER. \$26,893,000, as now modified.

Mr. FREAR. How many new projects have been adopted in the bill since the Mobile project was added and the others?

Col. NEWCOMER. If my understanding is right, there were 27, although I am not able to state from personal count. We have added to-day five.

Mr. FREAR. What are they?

Col. NEWCOMER. Norfolk, Mobile, Lake Pontchartrain, San Diego, and Mare Island.

Mr. FREAR. What is the total amount carried for the 32 new projects?

Col. NEWCOMER. I can not tell you. Mr. Brooker tells me that we had \$5,216,000 before for new projects. We have added to-day—I have given you the separate items—\$971,000.

Mr. FREAR. That is for Norfolk?

Col. NEWCOMER. No; the total.

Mr. FREAR. You have \$1,000,000 for Mobile alone?

Col. NEWCOMER. No, sir; we did not add anything there.

Mr. FREAR. I do not mean the cash authorization, but the total that you will eventually spend for the new projects.

Col. NEWCOMER. I do not know. There was the \$5,000,000.

Mr. FREAR. I understand. I should like to know what is carried by these 32 new projects.

The CHAIRMAN. We will get that information later.

Mr. FREAR. Can not we separate these figures a little better, so as to know what is for maintenance, what is for continuation of projects and what is for new projects? We should have those things itemized.

Mr. DUPRÉ. And what is for authorization?

Mr. FREAR. Yes, sir; \$5,000 authorized at Mobile, which means an expenditure of \$1,000,000. That is very essential.

The CHAIRMAN. We will separate the items.

Mr. FREAR. There are a number of places where we are carrying items of maintenance and continuation. That is kind of indefinite. It must be that you have the itemized figures and it seems to me it would be well to have those items separated.

Col. NEWCOMER. As I recall now there was only one item in New Jersey where we could not separate the amount required for maintenance and the amount required for improvement, but that was only a small amount, about \$21,000. The other items have been generally separated. In this item for Mobile, which we have just now authorized, we have used only the figure for maintenance, which is \$110,000. I think you can very readily pick out those items.

Mr. FREAR. Take, for instance, the Delaware River and it is continuing improvement and for maintenance, \$1,870,000?

Col. NEWCOMER. Yes, sir. In the annual report you will find that for maintenance the estimate is a certain sum and for continuing improvement another sum.

Mr. FREAR. As we have not the annual report to date, it seems to me it would be well if we could have, without too much figuring, just such items separated in a tabulated list.

Mr. DUPRÉ. Is there not a very practical and a very valuable benefit to be obtained by having these two propositions together so that they may be interchangeable?

Col. NEWCOMER. For continuing improvement and maintenance?

Mr. DUPRÉ. Yes, sir.

Col. NEWCOMER. That is not necessary for this reason: The law provides that any money appropriated for continuing improvement may be used for maintenance if necessary. It is not essential to discriminate in the appropriation. Of course the amount appropriated for maintenance is not available for improvement if it is appropriated for maintenance only, but if it is appropriated for improvement there is a provision which permits it to be used for maintenance if necessary.

Mr. DUPRÉ. That is what I have in mind.

Col. NEWCOMER. In the use of the word "authorization" you should note the technical meaning of that term which usually prevails. An authorization usually means an authorization for contracts beyond the cash appropriation made. As a matter of fact, if you adopt a project and do not make any continuing contract authorization you do not authorize anything beyond the amount actually appropriated; you simply adopt the project and everything in the future remains to be appropriated as Congress may see fit. In other words, there is no authorization of the sum required for the completion of the project.

Mr. FREAR. That always comes to us.

Col. NEWCOMER. Exactly.

Mr. FREAR. Colonel, could we not in some way have in our report a statement, as suggested by Mr. Treadway, and I can see the importance of it to all of us, showing the amount that remains due upon an uncompleted project, the amount that will be necessary to complete it?

Col. NEWCOMER. That is in the report.

Mr. FREAR. I understand, but very few people examine the report. Would not that be of value in the report that goes with the bill?

Col. NEWCOMER. It is in the report that goes with the bill. Your report that goes with the bill gives that information, as I understand it.

Mr. FREAR. That gives a great mass of figures.

Col. NEWCOMER. Yes. It might be well, possibly, to segregate that and give it item by item.

Mr. FREAR. I was wondering if it could not be arranged in a more intelligible form.

Col. NEWCOMER. As I understood, that is wholly within the province of the committee.

The CHAIRMAN. That has always been given heretofore. The total estimated cost of the project has not been given because that is always easy to obtain, but there has always been separated the amount appropriated for maintenance and the amount appropriated for the further improvement of projects and the amount appropriated for new projects.

Mr. FREAR. Of course, if it was understood in reading an item which was only for ten or fifteen thousand dollars to start a project that \$150,000 was involved in the item, that might cause the House to question the particular item. I do not know that it would.

The CHAIRMAN. We will now turn to page 27 and continue from the point we concluded yesterday afternoon, beginning with section 2.

Mr. OSBORNE. Mr. Chairman, if you will indulge me one question before we leave this matter, I want to ask Col. Newcomer what has been cut out on Puget Sound and in Washington generally.

Col. NEWCOMER. We cut out Anacortes Harbor, Skagit River and Skamokawa Creek, but that is really down below on the Columbia River, and Lake River, Washington. That is also down on the Columbia. The only one on Puget Sound, I guess, was Anacortes and the tributary, Skagit River.

Mr. OSBORNE. You left in Lake Washington Ship Canal?

Col. NEWCOMER. Yes, sir.

Mr. DUPRE. And also put in Grays River as a new project.

Col. NEWCOMER. Yes, sir.

Mr. SWITZER. Is not the Skagit River project the opening up of a lumber region?

Col. NEWCOMER. I really do not recall. I would have to look that up.

Mr. SWITZER. I recollect that Mr. Humphrey made a speech on that item, and as I remember it, said that it was a lumber and logging proposition.

Col. NEWCOMER. I think that is probably it.

The CHAIRMAN. Gentlemen, Col. Newcomer has been called to the telephone, but in his absence I will read Section 2 on page 27:

SEC. 2. Where separate works or items are consolidated herein or hereafter and an aggregate amount is appropriated therefor, the amount so appropriated shall, unless otherwise expressed, be expended in securing the maintenance and improvement according to the respective projects adopted by Congress after giving due regard to the respective needs of traffic. The allotments to the respective works so consolidated shall be made by the Chief of Engineers as authorized by the Secretary of War. In case such works or items are consolidated and separate amounts are given to individual projects, the amount so named shall be expended upon such separate projects unless, in the discretion of the Chief of Engineers and the Secretary of War, another allotment or division should be made of the same. Any balances remaining to the credit of the consolidated items shall be carried to the credit of the respective aggregate amounts appropriated for the consolidated items.

The CHAIRMAN. I will read Section 3, because I think the committee will not require any discussion of the other section:

SEC. 3. That in all cases where the authorized project for a work of river or harbor improvement provides for the construction or use of Government dredging plant, the Secretary of War may, in his discretion, have the work done by contract if reasonable prices can be obtained.

Mr. FREAR. What is that provision? Is that usually in the bill?

The CHAIRMAN. It is an old provision.

Mr. FREAR. It has not been in the recent bills, has it?

Mr. HULBERT. How does that provision operate with respect to section 6?

The CHAIRMAN. I do not think they conflict, because section 6 provides for all work done by private contract, while section 3, which we have just read, simply provides for where it is authorized to be done by Government plants and gives them the discretion of doing it by contract if they can obtain reasonable prices.

Mr. HULBERT. Provided the reasonable price is not more than 25 per cent in excess of what it would cost to do it by Government plant?

The CHAIRMAN. Yes.

Mr. DUPRÉ. They can be read together without conflict.

Mr. HULBERT. I do not see why it would not be advisable to put that amendment in there.

Mr. SWITZER. It is a useless amendment, so far as that is concerned, anyway.

The CHAIRMAN. In regard to section 3, as I understand the practical administration of the law, it sometimes happens that they can use the Government plant more advantageously on another improvement and get a very low contract price for the particular project which was authorized to be done by Government dredge, and this enables them to change from Government plant to private contract.

Mr. FREAR. Mr. Chairman, what occurred to me was that we are building these dredges constantly at large expense for the purpose of having the Government undertake the work, and I can see by this provision that the Secretary of War may at any time, if he deems it advisable, change from Government plant to private contract.

The CHAIRMAN. Col. Newcomer, I have just read section 2, and we have had practically no discussion of it, except the question has been asked to what extent this is new legislation, and I have not compared it critically with the past laws to point out the extent to which it is new.

Col. NEWCOMER. This is substantially the same item that was put in the act of 1912 to provide for the consolidations that were made that year, so that it is not new legislation. The only change, as I recall now, that was made at all was in the phraseology, wherein it is stated that the allotment to the respective works so consolidated shall be made by the Chief of Engineers, as authorized by the Secretary of War. I think it was phrased before "shall be made by the Secretary of War upon the recommendation of the Chief of Engineers."

Now, as a question of mere administrative handling of the matter, as these amounts are practically all very small, I thought it was more than likely the Secretary of War would authorize the Chief of Engineers to make the allotments of these small sums, within a certain limit which would be agreed upon, and I thought that was better administrative action than to have phraseology which would appear to indicate the necessity for going to the Secretary of War for all

these little sums—in some cases where it is a question of allotting \$1,000, \$2,000, or \$3,000.

Mr. FREAR. Colonel, why has this provision been left out of all the preceding bills? You say it was in the act of 1912?

Col. NEWCOMER. Of course, it was not necessary to repeat it because it covered the situation so far as those cases were concerned.

The CHAIRMAN. Colonel, may I correct you by saying that you probably intended to refer to the act of 1913 instead of 1912?

Col. NEWCOMER. Yes; section 7 of the act of March 4, 1913, reads:

SEC. 7. That where separate works or items are consolidated in this or subsequent river and harbor Acts and an aggregate amount is appropriated therefore the amounts appropriated shall, unless otherwise expressed, be expended in securing maintenance and improvements according to the respective projects adopted by Congress, after giving due regard to the respective needs of traffic. The allotments to the respective works consolidated shall be made by the Secretary of War upon recommendations by the Chief of Engineers. In case such works or items are consolidated and separate amounts are given with each project, the amounts so named shall be expended upon such separate projects, unless in the discretion of the Secretary of War, another allotment or division should be made of the same. Any balances remaining to the credit of the consolidated items shall be carried to the credit of the respective aggregate amounts appropriated for the consolidated items.

Mr. DUPRÉ. Apparently this adds the words, “upon recommendation by the Chief of Engineers.”

The CHAIRMAN. In answer to your question, Mr. Frear, upon comparison this is substantially existing law, except instead of having to go to the Secretary of War for each specific item of transfer of appropriation, it gives the Chief of Engineers a larger discretion, so that he only has to have general authorization of the Secretary of War.

Mr. HULBERT. In other words, it is reenacted to meet the situation created by this further consolidation of items?

The CHAIRMAN. Yes; because there are more consolidations.

Mr. FREAR. The difference between the situation now and when that act was passed is that you have been constantly grouping or consolidating many of these projects, which had never occurred to the same extreme in past years, has it?

Col. NEWCOMER. Not so extensively; no, sir.

Mr. FREAR. You have some items where you have grouped 29 different projects.

Col. NEWCOMER. I will have to plead ignorance. I did not know that this section 7 was in the act of 1913. I had overlooked that. We do not need this section here, because that section provides the necessary authority, except for a slight improvement in wording.

Mr. FREAR. So the only purpose now is to group as many as possible, and then the Secretary of War would practically have the determination and could change the appropriation from one to another if he desired. He would have that power.

Col. NEWCOMER. It is the same power that applied to the former consolidations.

Mr. FREAR. And the additional number grouped in each bill would have the effect of giving him that power.

Mr. DUPRÉ. The act of 1913 says “hereafter.”

Col. NEWCOMER. Yes; I did not realize that.

Mr. FREAR. For that reason, we have not understood the force of that provision in connection with this increase in the grouping.

Col. NEWCOMER. It becomes more important, of course, by reason of the fact that it is so much wider in scope.

Mr. FREAR. In other words, if we took all the projects, and gave the total amount of \$26,000,000 and left it at that, the Chief of Engineers, if it was grouped in one project, would have the opportunity of using the money as he chose on the individual projects?

Col. NEWCOMER. Certainly.

Mr. BOOHER. He does that with every lump-sum appropriation.

Mr. FREAR. Yes; with lump-sum appropriations.

The CHAIRMAN. Colonel, does the department express any preference for the language of section 2 over the language of section 7 of the act of 1913?

Col. NEWCOMER. The only distinction is in the matter of handling the allotments, and it seemed to me it was a little bit better this way. I do not know that it makes any substantial difference. Even under the other section the Secretary of War could authorize the Chief of Engineers to make the allotments up to certain amounts. But it seemed to me that this language would be better.

The CHAIRMAN. Col. Newcomer expresses the opinion that the slight difference in the verbiage makes the section here recommended a little more favorable.

Mr. FREAR. Mr. Chairman, the point does not occur on that, but upon the enlargement of groups, which, of course, enlarges the power. The question is whether the committee wishes to abdicate the rights which they have in determining the specific amounts to be given and permit, say, 29 projects to be put in one group—

Mr. DUPRÉ. Right here I want to say for the record—

Mr. FREAR (continuing). We have never grouped so many before. Mr. Chairman, I fear I have not made myself clear. The law is the same in this bill, but by changing the number of items that can go in a group you make the application more serious so far as the committee is concerned.

Mr. DUPRÉ. Right here I want to say for the record, and I want to ask Mr. Frear, ought not that to meet with your approval, in view of the fact that you have always contended for lump sums rather than individual appropriations?

Mr. FREAR. I am very glad the gentleman has asked that question, because whenever I have asked for a lump-sum appropriation it has been because the Army Engineers were unable in any other way to throw out many worthless projects, and that has enabled them, by a reduction of the total amount, to distribute it among the projects they thought were necessary.

Mr. DUPRÉ. In other words, you do not want any appropriation at all.

Mr. FREAR. Oh, yes; I do, by all means.

The CHAIRMAN. When you express the opinion that that is the only method by which the Engineers can discard useless projects, that ought to be accompanied by the statement that that is your opinion and you are not quoting the Engineers, nor would Col. Newcomer confirm that.

Mr. FREAR. No; I accept the amendment of the Chair.

The CHAIRMAN. We have been all over that matter, but I would like to say this: Individually, as a member of the committee, I am opposed to abdicating any essential function of this committee in the matter of legislation for river and harbor improvements; and at the same time, individually, I think that this grouping as recommended by the department does not amount to substantially any abdication of the functions of the committee, but does make for better administration.

I say it does not amount to any abdication of any of the functions of the committee, because in making up the aggregate amount of maintenance for a group of items we take the report of the Chief of Engineers containing the estimates for maintenance, subject to any modifications of those estimates by the Chief of Engineers based on conditions subsequently occurring, and then the committee, approving each item necessary for the maintenance of the project, simply gets the aggregate result at the end. Therefore the committee has fixed the aggregate amount carried for the maintenance of the group of items. The advantage of it in administration is this: As long as the conditions of all of these improvements remain the same during the time the appropriation is available, the Chief of Engineers will expend the money in accordance with the original estimate; but subsequently if there have been changes by reason of unanticipated deterioration or of storms or of any other conditions which were not anticipated, then he may divert a part of that aggregate sum appropriated from the improvements for which the segregated estimates were originally made to the maintenance of these other projects for which no original estimate was made, and to that extent it certainly makes for better administration and enables them to meet unanticipated conditions.

Mr. FREAR. That explanation is undoubtedly true, Mr. Chairman; but to just give the effect of this proposition we are now indorsing and which has never been accepted before to the same extent, there are 29 projects on page 9, from lines 3 to 11, amounting to \$15,800. It may be that some of those projects are not valuable or worthy projects, and it may be that all that money is to be expended on one project. The Chief of Engineers, under the law as we have placed it here, can put all of that money on any one of those projects, whether the Congress wishes to drop it or not. He is empowered on any of those 29 projects to expend the entire appropriation.

The CHAIRMAN. But as just stated, they will expend the money in accordance with their original estimates unless conditions subsequently change which make diversions necessary, and we must and can trust the Engineers to intelligently and fairly consider any subsequent changes and then determine whether any diversion is necessary.

Mr. FREAR. Then, Mr. Chairman, heretofore in giving the specific items and the specific amounts for each item in all these projects, which has been done in all the years past, the committee has not been using the best method of making appropriations because they have been made specific for the various items heretofore.

The CHAIRMAN. I would not want to reflect upon past committees—

Mr. FREAR. I would not want to do that either.

The CHAIRMAN (continuing). Because there have been some able committees among our predecessors.

Mr. SWITZER. Mr. Chairman, regardless of the mistakes of the committees and Congress in the past, I want to refer to the statement that Congress can not drop a project—that is, if they want to drop a project, they can not do it. Under this language the Army Engineers and the Secretary of War have authority to divert funds from one project to another, but if Congress thinks any of these projects are unworthy or the committee thinks that, the committee can drop it out of the bill or Congress can drop it out of the bill when it is being considered.

The CHAIRMAN. You have well stated it. Every one of these improvements in these groups have at some time been under improvement by the United States, and if any member of the committee in any one of these groups should upon information which he wishes to submit base a motion to strike out any one of them from the group, it is his privilege and duty to do so, giving his reasons therefor.

Mr. GALLAGHER. Could not the Congress do that?

The CHAIRMAN. Yes.

Mr. GALLAGHER. I understood Mr. Switzer to say that Congress could not drop a project.

Mr. SWITZER. No; I said that Congress could do so.

Mr. OSBORNE. Mr. Chairman, I will plead to the committee the valor of ignorance. I am a new member, not familiar with the procedure of the committee, but I am familiar with the general feeling of people outside—the people who criticize river and harbor bills, and so on. I have in mind the fact that there has been, as you all know, a great deal of criticism in the newspapers and among the public in regard to these bills. Now, I do not know whether my idea is worth anything or not, but I believe that there would be less criticism if you were absolutely definite in everything you do here; leave nothing to be ambiguous or indistinct. In this bill here, as has been stated, there is one paragraph where a large number of places are mentioned, and for some of them no appropriation is to be made at all. Now, the impression upon the public mind in looking at all of these unfamiliar and obscure names is that the members of the River and Harbor Committee are squandering a lot of money on places that nobody ever heard of, because such people do not look into the matter closely. I think, as a matter of policy, it would be far better to put your appropriation to the particular item it belonged to and leave out just as many names of places that have nothing to do with the bill as you are able to. I think you would make a better impression upon the public mind. Where you have 30 projects and only one or two places where you are going to spend any money, just name those one or two places and leave out the other places. I just give you that thought for what you may think it is worth. I have not any settled convictions about it and do not wish to impress my ideas unduly on the committee, but I give you that as my impression.

The CHAIRMAN. We are very glad to have your expression of opinion, Captain.

Mr. GALLAGHER. I was going to ask Col. Newcomer in regard to the paragraph to which Mr. Frear refers containing all these various names of places. Are they little streams or branches out of the Chesapeake Bay?

Col. NEWCOMER. Yes, sir.

Mr. GALLAGHER. What boats operate on those rivers?

Col. NEWCOMER. Principally, of course, the fishing boats; but there are steamers, of course, from Baltimore.

Mr. GALLAGHER. But all the steamers which operate on those rivers are Pennsylvania Railroad steamers, are they not?

Col. NEWCOMER. I do not know. The Pennsylvania Railroad, I know, has some lines; but whether they own all of them or not I do not know.

Mr. GALLAGHER. Do you know of any others except Pennsylvania Railroad steamers operating there?

Col. NEWCOMER. I think there are some.

Mr. GALLAGHER. I do not know of any.

Col. NEWCOMER. That is my impression, but I am not certain. Of course, that question was taken up, I believe, with the Interstate Commerce Commission, and they were permitted to operate those boats, I think, but I am not certain about that. They are an extension, of course, of their lines and not competitors.

The CHAIRMAN. I think the Pennsylvania Railroad has been compelled by the Interstate Commerce Commission, under the provisions of the section in the Panama Canal act, to part with their ownership as to some of their steamboat lines operating from Baltimore because they were competitive.

Mr. GALLAGHER. I do not think there is any commerce on any of the streams down there except what is carried in the Pennsylvania Railroad boats.

Mr. COSTELLO. Mr. Chairman, let me say just a word. Many of these streams are on the Eastern Shore of Maryland and the railroads are 15 or 20 miles away. I do not know who operates the steamboats and I do not care. Sufficient for me to know it is the only means of communication that those people have. That satisfies me as to the justification for my vote. Now, as to grouping these items. Take the Eastern Shore: I think there are something like 30 of those items involving an expenditure, under the grouping, of \$15,800. I do not think there is anybody—the War Department, the Board of Engineers, or anybody else—who would be able to say what portion of that amount would be utilized on any particular one of those streams. I believe that method is one which tends to efficiency, because there might be something on one of those rivers occur, due to increased tides, storms, where an emergency arises, and this money would be available to correct whatever wrong was done. Therefore, I believe that is a good step in the direction of efficiency by the War Department in taking care of just such small rivers as the ones I have referred to. If we can not trust the War Department to give efficient administration of items of that kind, we had better go out of business.

Mr. OSBORNE. Mr. Chairman, on the other side of the question, here is a group of small streams, and I agree with my friend that they ought to be taken care of, but that is not a fair illustration of the

question. For instance, in my own district, my friend, Mr. Kettner, lives about 150 miles from where I do, and San Luis Obispo is about 125 or 150 miles still farther away, the two extremes being about 300 miles—about as far as from Norfolk to New York Harbor. We are all included in one item of maintenance, and they are harbors that have no connection with each other whatever. It seems to me that they ought to be separate. For places like the ones you mention, I do not think there is anything out of the way about it, but where we are 250 or 300 miles apart, I think they ought to be separated and the particular places mentioned in the bill as separate propositions.

Mr. COSTELLO. Do you ever use the same dredges?

Mr. OSBORNE. Oh, no; as I say, they are as far apart as Norfolk Harbor and New York City.

Col. NEWCOMER. I wish to say, Capt. Osborne, that there is one thing that will be of particular interest to you in connection with Los Angeles Harbor. Los Angeles Harbor has been subject to very grave deterioration at times by reason of flood action and the discharge of silt from streams entering the harbor. To keep on hand an appropriation sufficient to handle all possible emergencies there would probably be further than Congress would be willing to go, but you are subject there in a much greater degree than in any of the other localities to that contingency. If you have a fund provided for all three which is applicable in case of need, you are in a safer position than if you only had a part of that fund appropriated for you and the other part not available.

Mr. BOOHER. Colonel, there is no difference in the principle of this matter whether you put five projects or 29 projects in a group?

Col. NEWCOMER. The principle is just the same.

Mr. BOOHER. It seems to me that this matter can be reached, if the gentlemen are not satisfied with it, by limiting the number that should be grouped together by an amendment; but this law has been in force since 1913 and it has been found to work very well.

The CHAIRMAN. I think we have been grouping them further back than that.

Mr. BOOHER. Yes. I do not think it was a law but simply a custom of the committee. I think before they were grouped by common consent of the committee and Congress would adopt them in groups as reported in the bill. I think in a good many instances, probably, we get too many in a group, and when members want to limit it to a certain number in a group, they can do so, but I would hate to change this method altogether because we would have a great deal larger bill and we would not accomplish any more than we accomplish in this way.

Mr. GALLAGHER. I would like to ask Judge Booher if he has any knowledge of how this has worked.

Mr. BOOHER. I have never heard any complaint, Mr. Gallagher.

The CHAIRMAN. I think it has worked very well, Mr. Gallagher.

Mr. GALLAGHER. I just wanted to know if he had any knowledge of how it has worked.

Mr. BOOHER. I do not know how it works, but I never heard any complaint, and that is all I can say.

The CHAIRMAN. We have had this method of grouping for five or six years, and Col. Newcomer can tell as to how it has worked.

Mr. GALLAGHER. But Judge Booher was making the statement that it seemed to work very well and I did not know but what he had particular knowledge about it.

Mr. FREAR. Col. Newcomer, what is the largest number ever placed in one group prior to 1904?

Col. NEWCOMER. I do not know.

Mr. BOOHER. Mr. Chairman, I just want to reply to my friend Gallagher in this way: I made the statement that it had seemed to work very well because I had heard no complaint about it. That is the only way I have any means of knowing, and usually when a thing does not work well you hear a noise.

Mr. GALLAGHER. All the noise I hear that things do not work well is in reference to a general bill. That is what they make all the noise about.

Col. NEWCOMER. Mr. Frear, I have the impression that the largest number of items prior to 1914 was 11, some tributary waters of Galveston Bay. I am not positive about it.

Mr. FREAR. That took in all that inland waterway, did it not?

Col. NEWCOMER. No; it was entirely distinct from the inland waterway. The tributary waters of Galveston Bay, Trinity River, Anhuac Channel, Oyster Creek, and Cedar, Chocolate, Turtle, Bastrop, Dickinson, Double and East Bay Bayous.

Mr. FREAR. What year was that?

Col. NEWCOMER. I do not remember. They have been combined for a number of years, but I do not know how far back.

The CHAIRMAN. If there is no further discussion under section 2, we will proceed.

Col. NEWCOMER. I think, Mr. Chairman, it might be well to answer the question that has arisen as to what advantage has been found from this method of grouping. I can state the experience of the department. The experience of the department has been that it has proven very desirable and very advantageous. It has afforded the very opportunity which we urge now as a merit, taking care of unforeseen difficulties which we can not anticipate in advance. Of course, what the conditions will be on each of the streams we know in a general way from experience, but we can not anticipate in detail, and it has afforded us an opportunity of shifting expenditures. That has occurred just in the past several months. A number of cases have come to my notice where the work on particular channels has proven to be more expensive than anticipated and we were able to provide for it.

Mr. FREAR. May I inquire if you have not \$1,000,000 left from the fund that was appropriated several years ago in a lump sum with which to provide for all immediate necessities?

Col. NEWCOMER. No; not all immediate necessities.

Mr. FREAR. I mean it can be applied to anything—

Col. NEWCOMER. It can be applied to necessities in so far as it will go.

Mr. FREAR. It can be applied to anything which is regarded by the engineers as necessary?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And that fund can be used at any time?

Col. NEWCOMER. That is available for necessities as they arise. As I said before, we expected that would all be required to take care of

the plants and necessary expense of supervision and matters of that kind. As a matter of fact, I might inform the committee that in view of the possibility of the failure of any river and harbor bill this year we have been looking around to see to what extent allotments made from that appropriation might be recalled and made available for more urgent or more essential work. You understand that in making these allotments the work does not proceed sometimes with the expedition we expect, so that it may be a matter of a couple of years before the expenditure is actually made, and it is very likely we could supplement that \$1,000,000 by some additional amount withdrawn from other places. But that is now the unallotted balance.

The CHAIRMAN. Your reference to a river and harbor bill at this session, Colonel, induces me to ask you this question, as to the attitude and opinion of the War Department as to the necessity of a river and harbor bill at this session.

Col. NEWCOMER. It is very thoroughly convinced that it is a matter of great importance. I do not think there was ever a time in the history of the country when it was so important as it is at present to make provision for all transportation facilities, and we certainly regard this bill as making an important provision of that character.

Mr. FREAR. And you feel, Colonel, that all these propositions that have been put into this bill are imperatively necessary at this time?

Col. NEWCOMER. I think possibly a categorical yes as an answer to that question might lead to some misunderstanding. We do not mean to say that each one of these little items for maintenance here is essentially necessary. They may not be actually required in all cases, but we ought to make provision for those things. We can not keep the channels of the country open and free and unobstructed for commerce, as they have been provided by the Government, unless we have a maintenance fund, and the sum we estimate here is the sum in our best judgment required for such maintenance.

Mr. FREAR. In the case of the Columbia River, you have just reduced that by \$975,000 on the bald statement of the division engineer, notwithstanding that appropriation has been recommended to Congress and been placed in the preceding bill.

Col. NEWCOMER. Exactly.

Mr. FREAR. Is the average item placed in this bill determined upon evidence of that weight?

Col. NEWCOMER. The items are all placed in this bill upon the testimony or information submitted by the district engineer, in reports of this kind and in documents which are submitted to Congress. This particular instance of a change in the policy of administering that work has been, of course, a new element which has arisen. It is on a very much more extended scale than the contingencies we want to provide for in the group system; but we took advantage of the fact that that work need not be carried on to report it at once to the committee so you need not appropriate money we find now is not needed. In other words, we want to give you all the information we have.

Mr. FREAR. And you think the Richmond Harbor and some of the projects which have been questioned here are more important than the mouth of the Columbia River?

Col. NEWCOMER. More important in their further prosecution now. Of course, they are not more important, by any means. The mouth of the Columbia River is far more important than Richmond Harbor, but it does not require the expenditure of money now.

Mr. COSTELLO. Col. Newcomer, in reference to the statement you just made, I interpreted that to mean that you had accomplished with the amount of money that was expended there all that was necessary for the efficient use of that river, and this additional expenditure is simply to add to the improvement and would not affect its efficiency at all?

Col. NEWCOMER. Only as it affects its maintenance; in other words, those jetties, particularly, are subject to storm action and to deterioration. The deterioration in this case has not been as great as was expected during the last winter and it is mainly during the winter that these things occur. For that reason the district officer now reports a condition there which he considers adequate to last over the coming year, and he thinks, under present conditions of advancing prices and greatly increased cost which was not anticipated when the former estimate was made, the work ought to be suspended for a year.

Mr. FREAR. Of course, that reference to the greatly increased cost applies to all these projects.

Col. NEWCOMER. Undoubtedly. That is unfortunately the case.

Mr. HULBERT. Are there any projects left out of this bill more important than any of those in it?

Col. NEWCOMER. Well, I do not know—

The CHAIRMAN (interposing). I submit, gentlemen, to ask Col. Newcomer to make comparisons is not altogether fair to him.

Mr. HULBERT. It is only a corollary of one that was just put to him by another gentleman.

The CHAIRMAN. I think we should let him speak of individual projects, but a matter of comparison is a matter of argument.

Mr. HULBERT. If the chairman feels it is not a proper question, I will not press it.

Mr. FREAR. I assume in all these matters the Colonel is not speaking for himself, and we do not hold him responsible for the judgment expressed on these projects. I assume it is the policy of the department.

Col. NEWCOMER. To answer Mr. Hulbert's question, I did not, of course, regard some of these projects provided for in this bill as more important than some of the new projects left out, by any means, except for the expenditure of the small sums proposed. Some of the new projects I consider more important, taken in a large national way; but here is a facility of navigation which has been provided and which the Government has undertaken an obligation to maintain, and the people are dependent upon it, and the cost involved usually is minor, whereas the cost involved in taking up new projects may often be very great. These small sums would not accomplish as much good on the larger projects as on the smaller.

Mr. HULBERT. Let me be specific. Do you consider the project for the improvement of the channel between Staten Island and Hoffman and Swinburne Islands as more important than the anchorage grounds off the Statue of Liberty?

Col. NEWCOMER. I consider the expenditure of the \$50,000 that is proposed in this case as better applied in that channel than the other.

Mr. HULBERT. But you did not think that last February.

Col. NEWCOMER. Why not?

Mr. HULBERT. Because you did not say so.

Mr. SWITZER. Mr. Chairman, has not this question and answer been put in the record at least once or twice before?

The CHAIRMAN. I think it is somewhat of a repetition, but still we want to yield every courtesy to Mr. Hulbert.

Mr. HULBERT. I will not press it as long as Mr. Switzer objects.

Mr. SWITZER. I did not object; I just asked the question.

Mr. TREADWAY. Mr. Chairman, I would like to ask a question, if that matter is closed.

The CHAIRMAN. Unless Mr. Hulbert wishes to continue.

Mr. HULBERT. I have stated I do not care to press it.

Mr. TREADWAY. I would like to ask if the suggested bill we are now considering is not rather more in the nature of a recommendation from the Chief of Engineers or the board, as the case may be, than in the framing of previous bills—that is, our previous method has been that you have submitted certain data to us which we had in these group books, and from that the committee made up its own mind as it went along from item to item and changed the amounts as they might see fit, you simply furnishing the data? If this bill is prepared by the department and recommended to us, are you not in that way—I am not criticizing you—offering rather more initiative advice and suggestions than in framing bills previously?

Col. NEWCOMER. Unquestionably. I do not know of any other case, in fact, where the department has ever presented a bill in this form, and it arises simply from the situation that developed as to what sort of bill, if any, would be considered by this Congress. We understood, and we were very much pleased when we got the information, that the bill as it was passed before would probably be re-passed. Then we got a request that we prepare a bill which we could recommend, pruning it down as much as possible, as required under the present conditions. It is for that reason we took it up in that way. I do not know that it has ever been done before, and I can assure you I do not want to do it again.

The CHAIRMAN. We will now proceed to section 3:

SEC. 3. That in all cases where the authorized project for a work of river or harbor improvement provides for the construction or use of Government dredging plant, the Secretary of War may, in his discretion, have the work done by contract if reasonable prices can be obtained.

Colonel, is that new, and will you explain the purpose of it?

Col. NEWCOMER. That was introduced in the Senate Committee on Commerce with the idea, particularly in view of the present situation of the cost of construction of Government dredges, that where a project provides for a dredge, as for instance, at the mouth of the Brazos River, it may be preferable, instead of constructing the Government plant at this time, to do the work by contract until conditions are more favorable for building the dredge. It is simply a precaution in the interest of economy in the present administration of the work. We have hitherto had authority of law for doing

work by hired labor where contracts are provided for, and here is practically the reverse of that proposition.

The CHAIRMAN. Colonel, you handed me the other day a recommendation for a legislative provision, and I will now read a new section of general law which has been recommended by the War Department.

That amounts hereafter paid by private parties or other agencies for rental of plant belonging to river and harbor work shall be deposited in each case to the credit of the appropriation to which the plant belongs.

Colonel, will you explain the necessity for that?

Col. NEWCOMER. The practice of the department with reference to the rental of Government plant for private work has been to permit it only in cases where a private plant is not available, as we do not want to enter into competition with private plants, and where also the Government plant can be spared at the time from the Government work. Now, the method of arranging the charge for that was to include the operating expenses of the plant on the work and a reasonable additional sum to cover the proportionate share of the annual cost of repairs and maintenance and upkeep of the plant. At first that was all arranged as one sum, usually figured at so much per day. We found the auditor required us to deposit those sums in the Treasury to the credit of the surplus funds, so that the appropriation did not get the benefit of it. In other words, in paying the operating costs of the dredge the appropriation was really depleted by a certain amount. Then, to avoid that in part, we made arrangements after that to make them pay the operating cost and a rental, the rental in that case being to cover only these other elements of depreciation and annual repairs, etc.

Then the auditor permitted us to deposit the operating costs which had been paid out of the appropriation back to the appropriation, but he still requires the payment of the rental into the surplus funds of the Treasury simply because there is no law authorizing it to go to the appropriation, and there is a general law which says that receipts unless otherwise specified by law shall go into the surplus funds. Now, there is a law that where a dredge belonging to one appropriation is used under another appropriation for river and harbor work the Secretary of War can make the proper adjustment of the credits between the appropriations; but if it is rented to private parties, or if it is rented to another department of the Government, our appropriation loses that amount which really ought to go to the maintenance of the plant, and this is simply to provide a better bookkeeping principle to cover that situation whenever a plant is used in that way, as it is every now and then, and the rental received should go to the credit of the appropriation which is responsible for the upkeep of that plant.

Mr. FREAR. Why could not that plant be used in some other place? We are short to-day of sufficient dredges, I understand, to do the Government work, and we are engaged in contract work all over the country. Why can not any Government plant that we have be utilized by the Government in some other place?

Col. NEWCOMER. We have that authority now, Mr. Frear, and we are doing it.

Mr. FREAR. Have you in the past rented these plants out to private parties?

Col. NEWCOMER. In a number of cases. The renting to private parties is usually only a question of a few days' work; say they want to get a channel to their dock or something of that kind and there is no private plant available, they get the Government plant which is at work in that vicinity. We have very frequently transferred dredges from one appropriation to another and worked them an entire season; as, for instance, the dredge, the Government dredge, was taken from the Ambrose Channel and put at work on Pollock Rip. There have been a number of transfers of that kind.

Mr. FREAR. How much money would you say was received a year from the rental of this Government property to private parties?

Col. NEWCOMER. It is not a considerable amount at all. I really do not know. It may run possibly into as much as twelve or fifteen thousand dollars altogether. That is simply a guess. Of course all those papers pass through my hands and I know in a general way. They come in every week or two. There will be a request from some point for a dredge and it is usually work for a day or two or as much as a week.

Mr. FREAR. Is not the Government using the dredge? Is the Government dredge idle at that point?

Col. NEWCOMER. It may be when they apply for the Government dredge that we can not spare it, but very frequently they apply for it when the dredge can be spared.

Mr. FREAR. Does the Government employ its workers on these private works?

Col. NEWCOMER. The Government employs the workers on the dredge.

Mr. FREAR. That authority has been given under other laws, has it not?

Col. NEWCOMER. I do not know whether there is any authority of law covering it or not, but I know that the Secretary of War has exercised that authority for a considerable time past. It is nearly all, of course, work associated with the work of improvement in the channel.

Mr. FREAR. So that any private plant that desires to have dredging done can apply for it, and the Secretary of War is authorized under existing law to allow the Government plant to be used for that purpose?

Col. NEWCOMER. He does that if there is no private plant available. We want to avoid competition with private plants, of course. If the dredge can be spared from the Government work it is done. I might state that the dredges are unfortunately idle a good deal of the time simply because the conditions do not require their operation. That is when they are used for maintenance. They are required to operate sometimes only two or three months in the year in maintaining a channel.

Mr. FREAR. Are they kept on that channel all the rest of the year?

Col. NEWCOMER. That depends, of course, on whether there is any occasion to use them elsewhere. Take, for instance, the dredges on the Mississippi River: We have there a large dredging fleet, and unfortunately in that case the time of operation is very short, but there

is no particular occasion to use those dredges elsewhere. They are pipe-line dredges and not seagoing dredges, and there is no other place within a reasonable distance where they can be used, and, therefore, they are kept up at whatever expense may be necessary in order to maintain the channel. When the dredges are not in operation, they are usually put out of commission and the crews laid off. If the Government plants can be spared from Government work, they can be used in doing some private work of this character.

Mr. DUPRÉ: Is the Government paid for that?

Col. NEWCOMER. Yes, sir; the Government does not lose anything on the proposition, and we see that the charge is sufficient to bear all of the expense that the Government is put to, not only in the actual operation of the dredge on the work, but also for a due proportion of the annual cost of repairs.

Mr. SWITZER. As I understand it, on the Pacific coast you have to have more seagoing dredges?

Col. NEWCOMER. Two more have been recommended. We have now on the Pacific coast several dredges that have to be shifted around a great deal from one port to another. Those seagoing dredges are liable to be shifted around more than the others because they have a number of harbors to maintain.

Mr. GALLAGHER. If a dredge is loaned or rented out in that way, why should the particular project receive credit for the earnings of the dredge?

Col. NEWCOMER. Because the project has to keep up that dredge.

Mr. GALLAGHER. But we have already made appropriations sufficient to do the work on the project.

Col. NEWCOMER. We do not make any charge as a profit. The Government is not going into this business for the purpose of making money, but the charge is only such a charge as is sufficient to maintain that plant, in so far as its relation to that project—

Mr. GALLAGHER (interposing). But we make appropriations for that. Why do you credit the appropriation for that project with the earnings of the dredge?

Col. NEWCOMER. For the reason that the plant is used on that work. It is there, and for a certain length of time the annual repairs on that dredge have to be paid out of the appropriation. We think that that work which it does ought to pay for those repairs, but if you put the rental into the general fund it is not available for paying up its share on account of the repairs, and your appropriation which is made to do such work is depleted by that amount.

Mr. GALLAGHER. It is a contingency, and are not the contingencies covered in the general appropriation? Does not that cover time lost by the dredge and everything else?

Col. NEWCOMER. You do appropriate sufficient money for that, but if this rental goes into the surplus fund, don't you see that the corresponding expense that has to be taken from this appropriation to pay that cost must be met, and the Government work is made to cost more than its proper share? Now, we think that the service which it has performed for other parties should not be made a source of general revenue and no part of its cost should be met at the expense of the appropriation. Of course, that is a matter of bookkeeping largely, but it is bookkeeping in favor of fair treatment of the appropriation.

Mr. FREAR. The effect of this would not be to increase the rent of dredges to private parties?

Col. NEWCOMER. No, sir.

Mr. FREAR. Of course there would be no inducement on the part of Government officials to do that, because it goes into the general treasury fund.

Col. NEWCOMER. There would be no such inducement in other cases, because we do not do it for profit at all. We charge what experience shows is the amount required for upkeep.

Mr. GALLAGHER. But, if it should be given to you to spend again instead of being appropriated, you accumulate a certain amount of money more than you would otherwise have?

Col. NEWCOMER. There have been one or two instances of that kind. Take the Ambrose Channel, for instance: The Ambrose Channel was maintained at a much less annual expenditure than was anticipated, and the dredges that were provided for the construction and maintenance of that channel have since been rented to other improvements, and those other improvements have paid to the Ambrose Channel funds which have been sufficient to maintain those dredges, and its own appropriation did not have to stand the entire cost of the annual upkeep of those boats. It has been to the advantage of both. It was to the advantage of the appropriation that got those dredges and an advantage to the Ambrose-Channel appropriation.

Mr. BOOHER. I would like to ask a question in regard to this language. This language reads:

That the amount hereafter paid private parties or other agencies for the rental of plants belonging to river and harbor work shall—

And so forth.

Ought not that to read:

That the amount hereafter paid by private parties or other agencies for rental of Government plants used in river and harbor work.

Do not the plants belong to the Government and not to river and harbor work?

Col. NEWCOMER. That would be a very acceptable change. That would be better.

The CHAIRMAN. Is there any further discussion on this proposed amendment? If not, we will take up the next section. Section 4 is as follows:

Sec. 4. That for examinations, surveys, and contingencies for rivers and harbors for which there may be no special appropriation, the sum of \$200,000 is hereby appropriated: *Provided*, That no preliminary examination, survey, project, or estimate for new works other than those designated in this or some prior act or joint resolution shall be made: *Provided further*, That after the regular or formal reports made as required by law on any examination, survey, project, or work under way or proposed are submitted no supplemental or additional report or estimate shall be made unless ordered by a concurrent resolution of Congress: *And provided further*, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or harbor mentioned in this act until funds for the commencement of the proposed work shall have been actually appropriated by law.

I might say, after making inquiry of Col. Newcomer, and according to my recollection, that is the language which has been used in former river and harbor bills, except, of course, as to the amount of the appropriation.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Do you think that it is advisable to go on making these surveys at this time? What is the disposition on the part of the Engineers with regard to that?

Col. NEWCOMER. We, of course, have no special interest in promoting these examinations at this time, and I do not know really what examinations are contemplated here. However, we thought that there was no objection to making such examinations as time will enable us to make. We will be handicapped, of course, by the calling off of many of our officers from river and harbor work to military service, but at the same time we will have in each river and harbor district an organization, and these things can be looked after if you deem it desirable to do so.

Mr. FREAR. Do you think that it would be any injury to the navigation interests or the commerce of the country if this was all stricken out?

Col. NEWCOMER. I think that it would be desirable, on the whole, to make this provision. In other words, I think that some provision for looking after the additional improvements required is very desirable. Just how desirable any particular item in here is, I do not know, because we do not know before investigation what is contemplated in each item, but I think that you should have machinery for enabling us to take up anything that is considered desirable as an additional improvement. It takes time, of course, to make these investigations, but there is no reason why these investigations should not be in progress. Of course we have to make that work subordinate to the demands of other work.

Mr. HULBERT. Will it interfere detrimentally with the activity of the men in your branch of the service?

Col. NEWCOMER. I think not. There is no limit of time involved here, because we can take them up as opportunity arises. We can go to the interested parties and find out what improvement is wanted, and that work, of course, is handled as we are able to handle it. As I have said, we make it subordinate to the other work.

Mr. HULBERT. You do not consider as especially urgent the authorization of any of these surveys, do you?

Col. NEWCOMER. I do not know about these particular items. I do not know whether any of them are urgent or not. Some of them may be very urgent. To my mind it is desirable to have such an authorization as this. Of course, we do not know any particulars about their urgency, because we do not consider them until the law is passed.

Mr. HULBERT. Your theory is that it is better to have the authorization so that you can do the work if you should want to do it, because if you did not have the authorization, you would be precluded from doing it?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. That is just the point I am making on the 40-foot channel through Hell Gate.

Mr. DUPRÉ. It is discretionary?

Col. NEWCOMER. Yes, sir; as to the time and extent of the investigation.

Mr. TREADWAY. How many men do you imagine are employed on this survey work in your various offices throughout the country?

Col. NEWCOMER. I do not think that any additional men are employed as a rule. I know that there have been one or two items of investigation, particularly these investigations with reference to floods, that have required the employment of additional men, but almost invariably these items are handled by the regular employees in connection with other work as time permits.

Mr. TREADWAY. You say that your men will be called from your work owing to the military and naval emergency at the present time?

Col. NEWCOMER. Yes, sir; and that will probably delay somewhat the action on these matters.

Mr. TREADWAY. So that this long list carried here in the bill more than likely would not be reached in the ordinary work of your force in the coming year?

Col. NEWCOMER. Of course you know that these are distributed among the 54 different district officers.

Mr. TREADWAY. Of course, if your force is reduced, this is the least important work to be done?

Col. NEWCOMER. It would be left, of course, until opportunity offered.

Mr. GALLAGHER. Do you mean that the men called away from the work would be the engineers?

Col. NEWCOMER. Yes, sir.

Mr. GALLAGHER. Would you lose any other men, or only engineers?

Col. NEWCOMER. Principally engineers, of course.

Mr. GALLAGHER. How many men do you employ permanently in river and harbor work in the different districts, have you any idea?

Col. NEWCOMER. I really can not tell you that. I have seen statements as to the number. There are a good many thousands.

Mr. GALLAGHER. They are not under civil service?

Col. NEWCOMER. Yes, sir; they are all under civil service except the day laborers. A great many of them are employed also, but all of our supervisory force, inspectors, foremen, and, in fact, nearly all the mechanics are under civil service. The skilled laborers are also under civil service. The men we used to call handy men are under civil service.

Mr. GALLAGHER. I understood you to say that your organization would run up into the hundreds?

Col. NEWCOMER. It runs up into the thousands.

The CHAIRMAN. May I make this general statement about the surveys? These surveys, I think, are the surveys that were included in the last bill. Is that not correct, Mr. Brooker?

The CLERK. With a few amendments by the Senate.

The CHAIRMAN. With a few added by the Senate Committee on Commerce. These represent the wishes of various sections of the country. Some of them, I can guess in advance, will not be favorably considered, and probably the bulk of them will not be. A majority of them will not be favorably considered, but some of them are undoubtedly very important. Now, if we as a committee attempt to differentiate between them and say which are important and which are not, the sections affected by them would never agree with us. They would think that they had been unjustly treated or that they had been neglected, while, after an examination such as the engineers make and a printed report is submitted giving the reasons for their favorable or unfavorable recommendation, that will be accepted

by them as a finality. The rejection of these surveys would bring disappointment to many sections and to the Representatives of those sections, as well as Senators, for that matter. We would be certainly following the path of least resistance, and we would be answering the demands of the various sections of the country and of the people who believe in their merit if we should include them. The people interested will never be convinced until these projects are examined in the ordinary way as required by law by the Corps of Engineers. Therefore I make the suggestion that we include these surveys just as they are. There is not one in my district that I know of.

Mr. GALLAGHER. In view of the statement of Col. Newcomer in reference to the policy to be pursued by the Engineer Corps with reference to these surveys, I would like to ask about the estimate of \$200,000 appropriated here.

Col. NEWCOMER. I think you ought to appropriate at least that much if you want to provide for handling as many items as you have here.

Mr. GALLAGHER. Do you think it is necessary to make that appropriation of \$200,000?

Col. NEWCOMER. Yes, sir; I think so. This also includes contingencies for rivers and harbors for which there may be no special appropriation.

Mr. HULBERT. I want to ask Col. Newcomer if there have not been surveys authorized heretofore upon which the work has not been completed and upon which the reports have not yet been made?

Col. NEWCOMER. Yes, sir; there have been quite a number of surveys that were not completed. I have a table which is brought up to date showing that. We have recently passed on some that went back as far as the act of 1913. Nearly all of them, however, have been cleaned up, and we are down to the act of 1915.

Mr. HULBERT. About how many authorizations are there upon which reports have not yet been made? I mean authorizations for examinations, etc.

Col. NEWCOMER. I think probably as many as 100.

Mr. TREADWAY. In view of that statement—

Col. NEWCOMER (interposing). Of course that is the normal condition where you have an annual river and harbor bill. Where you have an annual bill, we have an overlapping of examinations and surveys.

Mr. HULBERT. Have you also completed the work directed in a previous bill with respect to an examination into the projects, a number of which were specifically enumerated, with regard to their abandonment?

Col. NEWCOMER. We have not completed that yet. On page 41 of the report for 1915 you will find a table giving the work of the Board of Engineers on Rivers and Harbors. At that time there were 106 cases still outstanding. The number of investigations ordered has been 1,864, and of that number 1,587 had been completed in prior years and 171 last year, leaving 106 out of that total of 1,864. Now, of course, this table did not take into consideration the act approved July 7, 1916, which provides for a number of examinations. A number of those have already been completed, but the exact present status I do not know.

Mr. TREADWAY. Are there a good many that might be reported adversely and then again, within a year or two, the same project would be again included in the bill and a new survey asked for on account of practically the same item?

Col. NEWCOMER. That is not a frequent occurrence, I should say. It has occurred in some instances, but, as I understand it, the committee has usually limited those renewals of examinations by fixing the condition that they shall not be reexamined until after the lapse of a certain length of time.

The CHAIRMAN. I will say that it has been the policy of the committee heretofore not to authorize any examination or survey of any improvement within four years of any past examination or survey, and only then if evidence was submitted that some changes had occurred. Of course that evidence frequently consists of the statements of Members of Congress, and is not official. In that connection I would like to read this statement from the last report of this committee; that is, the report on the last bill, that did not pass. This report was prepared by Mr. Sparkman, and I call your attention to this statement:

It is a matter worthy of note that the last two years of river and harbor legislation has shown a material decrease in the number of surveys ordered. While the bill for 1915, for instance, carried provision for 209 surveys, that of 1916 only provided for 128, while this bill only contains 55 such provisions. All this would indicate that the necessities for waterway improvements are rapidly decreasing.

That 55 was added to but slightly in the Senate.

Mr. TREADWAY. They added quite a good many on the floor of the House after this report was prepared.

The CHAIRMAN. Yes.

Mr. FREAR. Perhaps all possible projects have been covered, and may not that be the reason for the reduction in the number?

The CHAIRMAN. That is the reason. As Mr. Sparkman said, the demands for new surveys have been decreasing.

Mr. TREADWAY. Inasmuch as the chairman desires to avoid showing any partiality in the distribution of these surveys, and is therefore opposed to cutting any of them out, I think it would be perfectly proper, on the other hand, in view of the financial emergency of the country, and in view of the fact that assistance in the department is to be curtailed on account of other work, and in view of the further fact that there are probably at least 100 that have not been reported upon, to leave them all out of the bill. In that way we avoid showing any partiality whatever and avoid any trouble with members of Congress.

Mr. DUPRÉ. Did not Col. Newcomer answer that by saying that some of these might be very important surveys? It is not within our power to go here and there and pick out one from another. We do not know the situation well enough to do that, and we would be here all summer if we undertook to analyze each one of them.

Mr. TREADWAY. They have been on hand for nearly a year, and they have not been sufficiently important for the department to think it worth while to even see whether any in the list were really important.

Mr. DUPRÉ. I am talking about those in this contemplated bill.

Mr. TREADWAY. So am I. We had this same list last spring.

Mr. DUPRÉ. But the bill did not pass.

Mr. TREADWAY. It passed the House and it was in the hands of the board. It could have determined whether they were important or not.

Col. NEWCOMER. We have too much other work to permit that before it is necessary.

Mr. TREADWAY. They were considered of secondary importance. Now, there never was a time when you were shorter of help for all the kinds of work that you need for this work than you will be in the coming year. I can not see any reason why they should not be excluded entirely from the bill.

Mr. DUPRÉ. Mr. Treadway, did I get the impression from what you said just now that because the House passed this bill last year and the Senate failed to pass it that the Chief of Engineers is vested with the right to go ahead and make these surveys?

Mr. TREADWAY. No, sir; not at all. Col. Newcomer stated that they did not look over the list and had no idea of the merits of any of them.

Mr. DUPRÉ. But you never expected the engineers to determine that.

Mr. TREADWAY. I asked him about it, and he said they had not looked them over. Therefore, I think they can not be very pressing, and they can not expect to take up that work, because we are preparing this as an emergency bill.

Mr. HULBERT. Did they recommend them?

Mr. TREADWAY. They made the recommendations——

Mr. DUPRÉ (interposing). How can they find out about the importance of these improvements until the surveys are made?

Mr. TREADWAY. Col. Newcomer, you said that this bill was prepared by the department, and, therefore, every item in it is a recommendation from the department——

Col. NEWCOMER (interposing). I would like to qualify that, if that is your understanding of what I said. We only went into the items for which sums were appropriated for improvement or maintenance. We did not go into the surveys, and we did not go into these other general provisions here. We thought that there was probably no objection to them, and we did not have any objection to them at all. We simply accepted it as it was. What we have thought necessary to consider has been the question of the amounts to be expended for maintenance and improvements, and we really gave no consideration to these other things.

The CHAIRMAN. We will turn to section 5, following the surveys, on page 35.

Col. NEWCOMER. May I suggest this: I want to call your attention to the fact that this sum appropriated in section 4 includes provision for a number of other things. For instance, \$50,000 of that goes toward the payment of a part of the office force in the office of the Chief of Engineers.

Mr. HULBERT. Does any part of this \$200,000 go toward the expense of making the examinations under section 14 of the act of 1915?

Col. NEWCOMER. The most of those examinations have been provided for from allotments made out of former appropriations. Of course if any of them should require further examination, and if there should be no appropriation for it, we would allot it from this fund.

Mr. HULBERT. In addition to the items specified in that act, the Chief of Engineers was directed to make a report upon any other projects, river or harbor, the further improvement of which under present conditions is undesirable or in which modifications of the plans or projects should be made.

Col. NEWCOMER. We have made a number of such reports.

Mr. HULBERT. Has a sufficient amount been appropriated to do what is contemplated in that provision of the law passed in the Sixty-third Congress?

Col. NEWCOMER. I think the funds would cover it.

The CHAIRMAN. Section 5 reads as follows:

SEC. 5. That the Secretary of War is hereby authorized and empowered to grant leases or licenses to municipal corporations and to public service or other corporations for the use of the surplus water not needed for purposes of navigation at the United States Government dams constructed at Lake Winnibigoshish and at Lake Pokegama, in the State of Minnesota, at such rates and compensation as he may deem just and reasonable, giving to municipal corporations the preference. That such leases or licenses shall not extend beyond the period of fifty years and that the moneys paid for the same shall go into the Treasury of the United States, to be used for the maintenance of the dams and the improvement of navigation in said river. The Secretary of War shall make such rules, regulations, and conditions as he may deem necessary to protect the interests of navigation and the United States, and the same shall be incorporated in the leases or licenses.

That latter place was not in the House bill, but was inserted in the Senate by Senator Nelson.

Col. NEWCOMER. I think that was the case.

Mr. HULBERT. Was that inserted because applications have been made for the use of such power?

Col. NEWCOMER. Yes, sir.

Mr. HULBERT. Have those applications come from municipal corporations or private corporations?

Col. NEWCOMER. I am not familiar with the details, because that comes under Col. Keller in the chief's office, and inasmuch as the permits and leases are before him, I did not personally come in contact with it.

Mr. HULBERT. I was wondering what the effect would be of the clause in line 1, page 36:

And to public service or other corporations for the use of the surplus water not needed for purposes of navigation at United States Government dams—

And so forth. Whether that would defeat the purpose that the author had in mind?

Col. NEWCOMER. I judge it might, at least.

Mr. DUPRÉ. That is an isolated case?

Col. NEWCOMER. Yes, sir; there are a number of other cases where the Government has authorized the leasing of power.

Mr. DUPRÉ. This is no general grant?

Col. NEWCOMER. No, sir.

Mr. HULBERT. This is to cover some specific case?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. And as I understand, it has the approval of the War Department if it has the approval of Congress?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Section 6:

That no part of the funds herein appropriated shall be used to pay for any work done by private contract if the contract price is more than twenty-five per centum in excess of the estimated cost of doing the work by Government plant.

Mr. HULBERT. That is the reenactment of the Good amendment?

Col. NEWCOMER. Yes, sir; the same thing.

Mr. SWITZER. I should like to ask Col. Newcomer whether he has noticed that that has brought about any material saving for the department?

Col. NEWCOMER. It certainly has not reduced prices, prices keep going up.

Mr. SWITZER. And the cost has been more since the enactment than before?

Col. NEWCOMER. Yes, sir; I do not think it is because of the enactment of that section.

The CHAIRMAN. The next item is section 7:

That Bayou Meto in the State of Arkansas be, and the same is hereby declared to be, a nonnavigable stream, within the meaning of the Constitution and laws of the United States. The right of the Congress to alter, amend, or repeal this section is hereby expressly reserved.

That is the matter in which you are interested, Mr. Taylor. That was discussed before the committee.

Mr. TAYLOR. There has never been a boat on Bayou Meto since it has been a stream, but it has been suggested that such streams were quasi-navigable. The Government has never taken it over in any sense. There has been no appropriation for it at all. That stream floods thousands and thousands of acres of valuable land, just as rich as there is anywhere, and the property owners on both sides of the bayou want to put in some locks and dams so as to hold the water back and permit it to gradually drift into the Arkansas River, so that this great farming territory may be reclaimed and put into corn, rice, and other food products. It does not cost the Government anything. It is lying there. It is of no use as a stream for the Government, and never was. I suppose Col. Newcomer will substantiate the proposition that the only reason why it should be considered as in any way navigable is that when the water in a stream of this character gets held back it tends to retard the navigable streams and that then the Government might object to it. This stream does not and will not do that, because the Arkansas River has more water in it sometimes than we know what to do with.

The CHAIRMAN. That matter was considered by the committee before?

Mr. TAYLOR. Yes, sir; and incorporated in the last bill.

The CHAIRMAN. It was unanimously agreed to by the committee. The next is section 8:

That all of that portion of Ollala Slough in Lincoln County, Oregon, above a point where a line that is one hundred and twenty rods south and running east and west and parallel with the section line between sections eight and seventeen in township eleven south, range ten west of the Willamette meridian, crosses said stream, be, and is hereby, declared to be a nonnavigable stream.

Col. NEWCOMER. That section was introduced in the Senate. I remember it. It came before the department. The department has no objection. It is another case where they wish to enter upon a

reclamation project, which would be hampered if it were considered a navigable stream. There is no objection to it.

The CHAIRMAN. They wish it locally?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next is section 9:

That section four of the river and harbor act of August eighteenth, eighteen hundred and ninety-four, as amended by section eleven of the river and harbor act of June thirteenth, nineteen hundred and two, be, and is hereby, amended so as to read as follows:

"Sec. 4. That it shall be the duty of the Secretary of War to prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other executive department. Such regulations shall be posted, in conspicuous and appropriate places, for the information of the public; and every person and every corporation which shall violate such regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding \$500, or by imprisonment (in the case of a natural person) not exceeding six months, in the discretion of the court."

Mr. HULBERT. As I understand, that was intended to authorize the department to protect the work that was going on at Coenties Reef, East River?

Col. NEWCOMER. That was one instance. The other was the transportation of explosives in New York Harbor which caused so much trouble. This was approved by the committee before. This simply makes general the authority to prescribe regulations for all the navigable streams of the United States instead of canals and waters directly under improvement. We found that there was no delegated authority for control over all the navigable waters.

The CHAIRMAN. The next is section 10:

That an act entitled "An act authorizing the condemnation of lands or easements needed in connection with works of river and harbor improvement at the expense of persons, companies, or corporations," approved May sixteenth, nineteen hundred and six, be amended so as to read as follows:

"That whenever any person, company, or corporation, municipal or private, or any State, or any reclamation, flood control or drainage district, or other public agency created by any State, shall undertake to secure any land or easement therein, needed in connection with a work of river and harbor improvement duly authorized by Congress, for the purpose of conveying the same to the United States free of cost, or for the purpose of constructing, maintaining, and operating locks, dry docks, or other works to be conveyed to the United States free of cost, and of constructing, maintaining, and operating dams for use in connection therewith, and shall be unable for any reason to obtain the same by purchase and acquire a valid title thereto, the Secretary of War may, in his discretion, cause proceedings to be instituted in the name of the United States for the acquirement by condemnation of said land or easement; and it shall be the duty of the Attorney General of the United States to institute and conduct such proceedings upon the request of the Secretary of War: *Provided*, That all expenses of said proceedings and any award that may be made thereunder shall be paid by such person, company, or corporation, or State, or reclamation, flood control or drainage district, or other public agency as aforesaid, to secure which payment the Secretary of War may require such person, company, or corporation, or State, or reclamation, flood control or drainage district, or other public agency as aforesaid, to execute a proper bond in such amount as he may deem necessary before said proceedings are commenced.

Col. NEWCOMER. The purpose of this section is to give the same authority to use the Government's power of eminent domain in behalf

of reclamation, flood control, and drainage districts and of the States as was before given in the case of persons and corporations. We found ourselves faced with this situation in Sacramento Valley, Cal., that the State wanted to carry out a project contemplating work on this flood-control plan which has recently been adopted which required the securing of land in greater amount than would be needed for the Government project then in force; but as the State wanted to do it, we could not exercise the power of eminent domain in behalf of the State. If it had been a private person or corporation we could have done it.

The CHAIRMAN. We considered the language in this section very carefully and made some changes, Mr. Dupré.

Mr. DUPRÉ. Yes, sir. That is, in the interest of economy.

The CHAIRMAN. The next is section 11:

That section four of the river and harbor act of July twenty-seventh, nineteen hundred and sixteen, be, and is hereby, amended so as to read as follows:

"Sec. 4. That there shall be printed one thousand five hundred copies of an index to the annual reports of the Chief of Engineers, United States Army, from nineteen hundred and thirteen to nineteen hundred and seventeen, inclusive, which shall be supplemental to the index published in House Document Numbered Seven hundred and forty. Sixty-third Congress, second session, covering the period from eighteen hundred and sixty-six to nineteen hundred and twelve, inclusive, authorized by section six of the river and harbor act approved July twenty-fifth, nineteen hundred and twelve, and shall also include an index of congressional documents relating to works of river and harbor improvement which have not been published in the annual reports of the Chief of Engineers, and an index of such other professional papers relating to the work of the Engineer Department as the Chief of Engineers may select for this purpose."

Col. NEWCOMER. Congress authorized a reprint of the annual report, which had been formerly authorized down to 1912, so as to bring it down to 1917. We found that it was going to be so very expensive to reprint the report, incorporating the additional data, that we thought a supplemental report covering the years down to 1917 would be much preferable. This was accepted by the committee before.

The CHAIRMAN. The next is section 12:

The Secretary of War is hereby directed to report without delay to this House the survey provided for by the river and harbor act of nineteen hundred and thirteen relative to the encroachments and obstructions in the Chicago River and all its branches, together with such encroachments as have been made in and along the lake front between Lincoln Park and the Indiana State line.

Was not that section insisted upon by Mr. Gallagher before?

Mr. DUPRÉ. Yes, sir.

Mr. KETTNER. And it was placed in the act before.

The CHAIRMAN. There is no special objection to it?

Col. NEWCOMER. I do not see any objection to it.

The CHAIRMAN. The next is section 13:

That the Secretary of War is hereby authorized to permit the Betterton-Morgan Company (Incorporated) to construct a dock or docks upon lots one, four, and five, block six, Seattle tidelands, or upon such portions thereof as he may designate, the construction of said docks to be under the supervision of and all material used therein to be approved by the Secretary of War and the necessary expenses of such supervision and construction to be borne by said company. Said company shall maintain said docks at its own expense and use and maintain the same under such regulations as the Secretary of War may prescribe. Said company shall vacate said docks and remove all its property therefrom upon twenty-four hours' notice to do so from the Secretary of War, and it shall give the Secretary of War satisfactory assurances that upon thirty

days' notice to do so it will demolish said docks and remove all debris pertaining thereto as may be required by the Secretary of War. Said docks shall from the time of their construction be the property of the United States and subject to the use of the United States for any purpose whatsoever, and the only interest the said company shall have hereunder is a revocable license to use the same under the terms and conditions set out herein.

Col. NEWCOMER. That section was inserted in the Senate. I am not sufficiently informed as to the details of this matter. It is, again, one that comes under Col. Keller. I do not see any objection to giving the Secretary of War the authority. It appears to guard the interests of the Government adequately.

The CHAIRMAN. The interests of the Government will certainly be protected?

Col. NEWCOMER. Yes, sir.

Mr. KETTNER. We had a section in the last bill with regard to the Atchison, Topeka & Santa Fe Railroad covering a lease on a strip of land that is owned by the Government and running out into the bay at San Diego to which the department has no objection.

The CHAIRMAN. I recall that section now. That was stricken out in the House on a point of order.

Mr. KETTNER. Yes, sir.

Col. NEWCOMER. As Mr. Kettner states, the department has no objection to that section.

Mr. COSTELLO. It would be subject to the same treatment in the House?

Mr. KETTNER. It may be; I do not know.

The CHAIRMAN. It would be subject to a point of order, but the point might not be made.

Col. NEWCOMER. We did not include that section in the bill, simply because we are basing our action on the Senate bill.

(Thereupon the committee adjourned, to meet to-morrow. Friday, May 4, 1917, at 10 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., May 5, 1917.

The committee was called to order at 10.30 a. m., the chairman, Hon. John H. Small, presiding.

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

The CHAIRMAN. I have a communication from Mr. McArthur this morning, in which he quotes a telegram received from the port of Newport commission, Newport, Oreg., as follows:

Special bond election for improving Yaquina Bay and Harbor carried with large majority. Our money is ready.

COMMISSION, PORT OF NEWPORT,
Per O. F. PACOSON, *President.*

Mr. McArthur states further in his letter:

You will note that the port of Newport is ready with its money and I trust that Congress will make the necessary appropriation to begin the work of improving the harbor at that place.

We will take this project up first this morning with Col. Newcomer.

Col. NEWCOMER. That action is obviously in response to the report on the further improvement of Yaquina Bar, Bay, and Harbor, Oreg., which was sent to Congress a few days ago, and which is not in print as yet, except in proof sheets. It will be some time before the document and maps will be available for examination. A number of years ago, and previous to 1905, jetties were constructed to improve the bar entrance at Yaquina Bay. Recently there has been an increased activity in the lumber situation tributary to Yaquina Bay occasioned partly by the opening up of an Indian reservation which had been closed for a long time, and the locality now is very desirous of getting an additional improvement across the bar and in the bay. The jetties have produced a channel over the bar 15 feet in depth, and there is a shoal about 2,000 feet inside the jetties over which there is a depth of 17 feet. The report submitted (H. Doc. No. 109, 65th Cong., 1st sess.), recommends the extension of the jetties and some dredging and rock removal to give a depth of 20 feet through the entrance and 18 feet inside.

The total cost of the extension of the jetties and the work inside amounts to about \$836,000, and the proposition is, as recommended by the department, that that be done on a 50 per cent basis of cooperation, and it appears that the port has now provided the money. I have not, of course, discussed this matter with the Chief of Engineers, as it has been presented to me since my arrival here. I question whether it is of the character that would justify special consideration at this time. We think it is a desirable piece of work. The past tonnage has been very small. I do not think it has been over 20,000 or 25,000 tons a year. It looks now as though they are taking hold of this lumber proposition on a larger scale. This is evidenced by their willingness to contribute so much money. There is some rock on the bar that will have to be removed. I question, Mr. Chairman, whether it is of the emergency character which will justify taking it up in this exceptional way before the document is printed. I do not recall anything particularly urgent in regard to it except to get out boats on a larger draft. Out there now they can probably get boats out drawing 17 to 20 feet at high water. If they can get out a draft of 24 feet at high water they can get out the larger draft lumber boats in the trade on the coast. It is a project which we favor, but hardly regard it as of an emergency character. It is one that will undoubtedly be approved by Congress at some time in the future. Of course, if Congress sees fit to go on and adopt projects of that class now, why, then, we will be very glad to consider them, but I do not see that we have any special ground on which to urge them.

Mr. COSTELLO. The tendency is to keep the amount of this bill down. Now, is there another item in that particular locality that money could be taken from and transferred to this?

Col. NEWCOMER. No, sir. We have taken something off of Columbia River at the mouth. We have a sufficient balance on hand there for the dredging required at the mouth. This bill has come up so far with every item considered by the Chief of Engineers, and I believe you would have it that way—that every item adopted has been considered by the Chief of Engineers. This matter has not yet been brought to his attention. I am merely giving you my own personal

views, and whether he would agree I can not say. As a rule, our views have been in accordance, and there is an apparent opportunity to take it up in the regular way.

The CHAIRMAN. If we were starting a bill in the regular way, as we hope we will at the next regular session, then, judging from these preliminary statements by Col. Newcomer and just a casual glance at the report of the Chief of Engineers, it looks *prima facie* that it will be included at that time.

Mr. KETTNER. I would like to say to my colleague that we could not very well press the adoption of this project and leave out Crescent City, because that project should be adopted, in my opinion, before this, or at least at the same time.

Col. NEWCOMER. Of course, Yaquina Bay has now sufficient water for the lighter-draft coastwise boats. It is a question of giving them a deeper draft.

The CHAIRMAN. Colonel, while we are on the Pacific coast—Capt. Osborne has asked the question several times; for his information—about how will you spend this appropriation on the Columbia River and the lower Willamette.

Capt. OSBORNE. I think I understand that there is money enough there to keep up the dredging at the mouth of the river. That is all I wanted to know.

Col. NEWCOMER. \$310,000 is the estimate for the work inside of the mouth, from the estuary up to Portland. We have on hand sufficient for dredging at the mouth. On March 1 there was a balance of \$304,000 on hand.

Mr. TREADWAY. Have you seen Gen. Black, Colonel, within the last hour—after I was there. I have had a talk with him in regard to Portland and Boston Harbors.

Col. NEWCOMER. Yes; I know what he said about Portland Harbor. He did not say anything about Boston Harbor.

Mr. TREADWAY. He authorized me to say to the committee that so far as the adoption of the project was concerned it was perfectly agreeable to him to have it go in, provided it did not carry the appropriation it carried in the last bill. He would be very glad to have it carried in the same way the Mobile project was adopted without carrying the amount of money. Also, since you have seen him, Senator Hale was there.

Col. NEWCOMER. I spoke to him yesterday about Boston Harbor, and at that time he expressed the view, confirming his former action, that he had not seen in that case anything that would justify him in recommending it as a proposition for military preparedness. He was in a great rush this morning; and he probably neglected, for that reason, to tell me about Boston Harbor after seeing you. About Portland Harbor, in that case he does not see any reason why it should be included in this bill; but thought if the Canadian Government should ask that it be included as a military measure he would be very glad to recommend it simply on their opinion that it was needed. The main use that is expected for this increase in depth is the shipment of grain that is diverted from Montreal and other Canadian ports during the winter weather, when they are stopped by ice. They have made, of course, in Canada, very great expenditures for the purpose of accommodating this grain traffic

wholly within their boundaries, so we do not understand that they favor the diversion of that traffic to Portland. But, in view of the existing conditions it is possible that they may consider it a matter of military value in the shipping of grain to Europe to have this done at this time, so we are awaiting the result of the conference with the officials of the Canadian Government. I understand the matter is being taken up to-day with the British ambassador, and we will get their views next week, so that there is no definite proposition yet for his conclusion. I might state in that connection as bearing upon the present urgency that there is a 9-foot tide at Portland, and the project depth is 30 feet, so there is no question of any boats being able to get in and out on the tide, and if the additional depth is provided at the dock so that a boat can lie at the dock and load during the low tide it is a question of simply waiting a few hours to get out on the tide. The lack of depth at the dock is one difficulty there. A boat drawing 34 feet simply could not load there. They are now deepening the space at the dock to 33 feet at low water.

Mr. TREADWAY. I think, Mr. Chairman, it would not be out of place to know of the interview this morning between Senator Hale and Gen. Black. Senator Hale was accompanied by one of the attachés of the British Embassy. The entire matter seemed to hinge, in the opinion of Gen. Black, on the fact whether or not traffic would be diverted from the choked ports of Canada. The Grand Trunk Railway has good equipment at Portland, but it is practically unused as long as traffic is open in Canadian ports. The Grand Trunk, which is under the authority of the Canadian Government, does not use its facilities at Portland during the period when the Canadian ports are available—not closed to the ice of winter. Gen. Black desired an assurance from the representatives of the British Government that this diversion of traffic would not take place to the detriment of the use of Portland, provided this work was undertaken. He was anxious that I should know of the situation, and the representative of the British Embassy left at once to see the British ambassador, so that it seems to me that the matter is in abeyance until further word comes from Gen. Black as to his conclusions from any further representations that are made by the embassy.

The CHAIRMAN. Mr. Treadway, before leaving, and with reference to what you said about Boston Harbor: Boston Harbor is not mentioned among these recommendations we have in printed form, so that if nothing is included for Boston for maintenance we would have nothing to which to attach this item for the new project.

Mr. TREADWAY. Should there not be an item for maintenance included for Boston Harbor?

Col. NEWCOMER. No, sir. They have sufficient funds on hand. I had not thought to put that in with these minor items on account of its much greater importance.

Mr. TREADWAY. Of course, I should like to see the item carried as it was in the last bill; but realizing that that is not possible under existing conditions, the next best thing is to accept the suggestion that Gen. Black makes—to let it go in as a project approved without appropriating any funds.

Col. NEWCOMER. Of course, that could be done, as has been suggested in another case, simply adopt the Boston project and pro-

vide that any funds available may be used toward the prosecution of the new project.

Mr. TREADWAY. How much is the balance on hand there?

Col. NEWCOMER. Something like \$85,000 to \$88,000 available. Boston Harbor is divided into several item. The balance available on the 1st of March, leaving out Chelsea Creek, would be about \$85,000. Including Chelsea Creek, it would be \$135,000. An item similar to the one inserted in the bill for Black Rock Harbor could be used for Boston Harbor. It reads like this:

The unexpended balances of appropriations heretofore made and authorized for the improvement of this harbor are hereby made available for maintenance and improvement in accordance with the report.

And so forth.

We might dispose of the matter in that way. I will take this matter up with the Chief of Engineers this afternoon and get his approval of that item, and then I can telephone down to Mr. Brooker, and, if it meets the approval of the committee, it can be inserted in that form.

Mr. SWITZER. I move that the provision for Boston Harbor, as approved by the Chief of Engineers, be inserted in the bill.

Seconded by Mr. Kettner and carried unanimously.

The CHAIRMAN. With that authority, then, if we get the final approval of the Chief of Engineers, we will include it in the appropriate language.

Mr. COSTELLO. What was the decision in regard to Portland?

The CHAIRMAN. The decision as to Portland Harbor is in abeyance, awaiting the report of the British Government—rather, the Canadian Government—as to the probable use of that port for the deeper draft if it should be approved, and then it is to be inserted in the bill if the Chief of Engineers approves.

Mr. TREADWAY. I move that we authorize the chairman to insert the project for Portland Harbor, as it is understood by the committee.

The CHAIRMAN. Is it also your pleasure that, if that recommendation does not come in time before the bill is reported, that it shall be offered on the floor?

Mr. TREADWAY. I suggested that to Senator Hale, and I suggested that there was no occasion for delay on that account, because a committee amendment would be accepted by the House without objection. I include that in the motion.

Mr. KETTNER. I second the motion.

The CHAIRMAN. Then the motion is that, if the improvement of Portland Harbor shall be recommended by the Chief of Engineers, that it shall be included in the bill if that recommendation is received before the reporting of the bill, and if not it is to be offered on the floor of the House, carrying such amount as may be recommended by the Chief of Engineers.

The motion was put to a vote and carried unanimously.

The CHAIRMAN. The next item is the one for East River and Hell Gate.

Col. NEWCOMER. In the first place, with reference to a 40-foot channel between East River and Hell Gate, the Chief of Engineers is of the opinion that a 40-foot channel there will probably not be

required for a number of years to come, and he did not see his way clear to recommending it unless it should receive the approval of the Navy. If they should now request it, he, of course, might recommend it, on the basis of their views about it. They have so far only recommended the 40-foot channel through Diamond Reef and 35 through Hell Gate, stating, however, that ultimately they would like to have 40 feet through Hell Gate. We have had no indication that they want it now. I understand Mr. Hulbert is taking that proposition up with a view of getting some approval from the Navy Department. If it should be recommended by the Navy Department, I do not think the Chief of Engineers will offer any objection to that at all, because we are acting on that matter purely on the expression of the Naval Board as to what their needs are.

Coming to New York Harbor proper Gen. Black said, as a result of the conference with Mr. Hulbert, that he was heartily in favor of authorizing the projects for widening the channel opposite the anchorage ground in the upper bay and for the removal of Craven Shoal, provided no additional sum of money be appropriated for that purpose. In other words, he thinks that that work should be proceeded with as soon as we can get on a normal basis, and for that reason he has approved a form of amendment to the bill, on page 3, which is as follows:

New York Harbor, New York: For maintenance of entrance channels and for the improvement of the upper bay opposite anchorage grounds in accordance with the report submitted in House Document Numbered Five hundred and eighteen, Sixty-third Congress, second session, and at Craven Shoal in accordance with the report submitted in House Document Numbered Five hundred and fifty-seven, Sixty-fourth Congress, first session, \$40,000; and the unexpended balances of appropriations heretofore made and authorized for the improvement of the entrance channels are hereby made available for improvement in accordance with the reports submitted in said documents.

Forty thousand dollars is the same amount recommended before. This language takes the place of lines 15 and 16 in the last committee print. Then it would proceed as in the bill. Now, the reason for using the expression "entrance channels" instead of Ambrose Channel is to get that on a little better status. The project provides for two channels and there is no particular reason apparently why they should name one and not the other, because the project provides for the maintenance of both. The reason for making available the unexpended balance of appropriations is this: That we have \$150,000 of the balances remaining there which to some extent, possibly, might be used on these projects. The Craven Shoal project is a small item. It is a shoal that is really in line with the Ambrose Channel extended. In order to continue it up the bay and to get a clear unobstructed channel without changing the course that improvement should be made.

Mr. COSTELLO. Now, by adopting these two projects what amount of money do we commit the Government to in the way of future expenditures?

Col. NEWCOMER. Craven Shoal is a small project. That improvement is to cost \$30,000, and the former bill provided \$200,000 on the other project. Its total cost is \$830,000. That will be \$860,000 in all.

Mr. COSTELLO. Practically a million dollars, and we are committing the Government to that, so that we have given practically \$200,000

in this bill directed to these improvements with a consequential improvement of nearly a million.

Col. NEWCOMER. Practically that.

Mr. COSTELLO. I just wanted to call attention to this fact, that it is not a recommended project.

Col. NEWCOMER. Now, with reference to the Bay Ridge and Red Hook Channels, which were also taken up with the Chief of Engineers by Mr. Hulbert. The Chief of Engineers did not see his way clear to make any changes there. In other words, he did not think it should be included.

The CHAIRMAN. You have embraced all the matters relative to New York Harbor which were rereferred to the Chief of Engineers. That brings us now to the rereference of Buffalo Harbor.

Mr. TREADWAY. Before you leave New York. May I ask if it is understood that this is agreeable to our colleague, Mr. Hulbert?

The CHAIRMAN. I am sure the present recommendation against 40 feet at Hell Gate is not agreeable to him. These others, of course, will be.

Col. NEWCOMER. I understood he is willing to accept the decision of the Chief of Engineers on all these items except Hell Gate. He did say he was going to see if he could not get the recommendation of the Navy Department for that project.

The CHAIRMAN. Now we will go to the reference at the request of Mr. Dempsey, that Buffalo Harbor, Port Chester Harbor, and Ogdensburg Harbor be reconsidered.

Col. NEWCOMER. The Chief of Engineers spoke to me about those projects last evening. He did not go into the details as to what presentation was made to him. His conclusions were that nothing further should be included in the bill for either one of those items.

Mr. DEMPSEY. Colonel, Ogdensburg has a commerce with the St. Lawrence River, has it not?

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. And that really is the largest commerce carrying river in the United States?

Col. NEWCOMER. No, sir. It surely can not be as large as the St. Marys, or the Detroit, or the Hudson. That is news to me. As a matter of fact the commerce of Ogdensburg is mainly a ferry commerce. But there is, also, a commerce along the river of a considerable amount.

Mr. DEMPSEY. Here is what I have in mind. Would there be any chance of this being put on the same basis with Portland—of a conference with officials of the Canadian Government to see if this improvement could not be made of use in handling grain and other materials for export?

Col. NEWCOMER. I think the Chief of Engineers would be glad to carry out the wishes of the Canadian Government. I have not spoken to him about the matter. As I understand the proposition there the greater urgency is on account of the ferry passenger traffic. They do have a very difficult situation there in the winter frequently, when the ice remains in the harbor and they have to land passengers on the ice to walk ashore. It is a desirable item in that way, but we did not consider it of special urgency.

Mr. COSTELLO. Can not we put this in the same position as a matter to be referred to the British Government?

Col. NEWCOMER. I think if the matter is referred back it should be taken up by some other party with the British Government. I do not understand that Gen. Black has taken any of these matters up with the Canadian Government officials.

Mr. COSTELLO. Then you are putting the parties interested in the position of taking improvements up with the British Government instead of taking it up with our Government.

Col. NEWCOMER. Well, the point is this, that if the matter is taken up directly you will get quicker action. I do not know how this other matter was handled. I know there was a conference in the Chief of Engineer's office, at which a member of the British Embassy was present. If the Chief of Engineers takes it up, he has to take it up with the Secretary of War, and the Secretary of War takes it up with the Secretary of State, and so on, which consumes a great deal of time. It seems as if the parties interested here could get at it more directly.

The CHAIRMAN. Just as the Portland matter was taken up.

Col. NEWCOMER. The point is this also: It is not on account of any disinclination on our part. This is a very time-consuming process.

The CHAIRMAN. There is \$220,000 on hand for Buffalo Harbor, and that is the reason no estimate is made for this bill. The Chief of Engineers regarded that as sufficient.

Now, we will go to the rereference to the Chief of Engineers asked for by Capt. Osborne relative to Skagit River and the group item for San Diego, Los Angeles, and San Luis Obispo Harbors.

Col. NEWCOMER. Regarding Skagit River, Wash., he did not see that there was any special urgency in that case. The situation is this: The improvement proposed in the document that was included in the last bill, which failed, was only for the improvement of Skagit City Bar. There is a wide place in the river where, after freshets, the depth is reduced to as little as 3 feet, and in order to get over that bar the steamboats have to wait for the tide, and sometimes they have to wait for the higher tide, which occurs only once in 24 hours. Then, as time passes, that bar improves somewhat. Further improvements is recommended by dredging and training dikes so as to give passage at all stages of the tide. The report on the project states that during most of the months when the movement of crops is taking place the stage of the river is sufficient to allow the boats to go over the bar at those times. But there are times when the boats are delayed.

I would like, however, to make this statement: You will understand, of course, that the Chief of Engineers has been tremendously busy lately, and the consideration that he has been able to give these projects has not been as elaborate as we would wish to give to them. Our considerations are based on the consideration we have been able to give them.

With reference to the group item including San Diego, Los Angeles, and San Luis Obispo Harbors we see no objection, if you desire to separate them. Care should be taken to include the additional work at San Diego which has been introduced at this time.

Mr. KETTNER. That is satisfactory to me.

Col. NEWCOMER. We do not see any objection, except that we prefer in general to observe the grouping principle.

The CHAIRMAN. I would say to the committee that I am in favor of this grouping plan and think it preserves the functions of the committee, and at the same time gives that latitude of administration by the War Department which makes for the best results of appropriations for maintenance. This is the only grouping in the bill about which, to my mind, there seemed to be any reasonable doubt. San Diego is a very important harbor. It is the only natural harbor between San Francisco and the southern limits of California, if my recollection is correct. Los Angeles is a very important harbor, but to a large extent artificial. San Luis Obispo is not as important as the other two. The local reasons would seem to indicate the wisdom of a separation there, so what is the pleasure of the committee now about that separation?

(Mr. Osborne moved that the items be separated. Seconded by Mr. Switzer and Mr. Costello. Carried unanimously.)

Col. NEWCOMER. Of course, San Luis Obispo would be dropped out, as there is no appropriation asked for it.

The CHAIRMAN. Judge Booher is not here this morning, and in order that he may not feel neglected we will give him every courtesy in his absence.

As you will remember, Judge Booher, in regard to the item authorizing the Secretary of War to permit the Betterton-Morgan Co. to construct docks upon lots 1, 4, and 5, block 6, Seattle tide lands. He thought the provision was too restrictive on the Betterton-Morgan Co., to which the franchise was to be granted, in that it requires the said company to vacate said docks and remove all its property therefrom upon 24 hours' notice to do so from the Secretary of War, and out of courtesy to him that matter was also referred.

Col. NEWCOMER. The situation about that is this: This paragraph, or section, was introduced by Senator Jones, or by the Senate Committee on Commerce on his request, and it was understood to be approved by the corporation. The improvement has been under discussion for some time with the War Department, and I have consulted with the Chief of Engineers and Col. Keeler, who has been handling this particular case. It appears that there is no objection on the ground of navigation to this being done. The matter, however, has been referred to the district officer for report in view of certain features that have developed.

There is some doubt as to whether the Government owns the land, as there is some question whether the conditions attached to the grant of title from the State have all been satisfied; so in case the Government has no title I suppose it would go back to the State. But if the Government's title is found to be good, this question has arisen: If this corporation wishes to make use of the land of the Government there ought to be some payment to the Government, either in the form of a rental, or we might sell it. Apparently there is no use that the Government will make of this land. This property abuts on upland that is owned by this corporation. If the title is in the Government it is proposed to ask the district officer to report upon the best procedure—whether to sell it or lease it, and upon what terms. I notice that this item does not make a provision for payment of anything to the Government. That is the only thing that occurs to the Chief of Engineers in regard to it. We

are not opposed to it. We think that the Government should be protected, that is all.

The CHAIRMAN. If I might make this suggestion without attempting to minimize the force of what Col. Newcomer says: As this was offered in the Senate and would probably be insisted upon again, and if insisted upon would receive the approval of the Senate Committee on Commerce, and make an amendment making it necessary to send the bill to conference, and that as the Government is fully protected here, would it not be well to let that remain in the bill, and if, before the bill comes up in the House, the Chief of Engineers receives any report from the district officer making an amendment necessary we can amend it on the floor.

Mr. KETTNER. I move that such a course be taken.

Mr. SWITZER. I second the motion.

The CHAIRMAN. Without objection, then, that will be taken as the action of the committee.

Mr. DEMPSEY. Should there be a new survey for Buffalo Harbor? I guess, in view of the recent report on that harbor, that is not necessary. Was not that provided for in the last bill? What they want is a survey for widening the entrance channel.

Col. NEWCOMER. We have made a report on the widening of that entrance, and that matter can be handled by a committee resolution calling for a review of that report, which would accomplish a further study of that matter.

The CHAIRMAN. Then we will take it up, Mr. Dempsey, and study it at some future time.

Col. NEWCOMER. About Mobile Harbor, the thought occurred to me afterwards that this wording is not just as it should be. I would suggest a slight change in the wording on page 14, line 5. That was changed to read: "For maintenance of channel connecting Mobile Bay and Mississippi Sound, \$5,000; for improvement and maintenance of Mobile Harbor and bar in accordance with the report submitted in House Document Numbered Seventeen hundred and sixty-three, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document." Now, I would like to substitute the following: "For maintenance of Mobile Harbor and bar and for improvement in accordance with the report, and so forth, \$110,000," which makes money available for maintenance without being subject to any conditions. The improvement work only should be subject to the conditions.

(Mr. Dempsey moved that the change as suggested be made. Mr. Kettner seconded the motion. Adopted unanimously.)

The CHAIRMAN. Mr. Lever, of South Carolina, came in this morning and said he could not remain because his Committee on Agriculture meets the same time. He desired me to bring to the attention of Col. Newcomer the new improvement on the Congaree River, which was included in the last bill and carried an appropriation of \$100,000. The Congaree River comes up to Columbia, S. C. A line of steamboats has been operating on that river for some years, and it is very important to Columbia that this line of boats be continued. I happen to know about the local situation. On account of the regulation of rail rates as well as the prorating between railroads and the boats it is necessary to keep this line of boats running and he desired me to bring the matter before the committee and also

to the attention of Col. Newcomer to ascertain if, under the circumstances, that improvement was such an emergency as ought to be included in the bill.

Col. NEWCOMER. One hundred thousand is the amount involved.

Mr. COSTELLO. That is the river about which there was so much controversy in the last session, is it not?

The CHAIRMAN. I think you are thinking of the group farther south, the Altamaha, Oconee, and Ocmulgee Rivers, Ga.

Mr. COSTELLO. There is a railroad terminal at Columbia, is there not?

The CHAIRMAN. Yes. It is quite a railroad point. The title of this group is Santee, Wateree, and Congaree Rivers, and there is \$30,000 appropriated in this bill for maintenance, and the last bill carried this additional provision: "For improvement of Congaree River in accordance with the report submitted in House Document Numbered seven hundred and two, Sixty-third Congress, second session, \$50,000."

Mr. COSTELLO. Is not that the river that our friend Mr. Frear so strongly opposed?

The CHAIRMAN. I do not think so.

Col. NEWCOMER. I will look it over and speak to the Chief of Engineers in regard to the matter and report his decision to the committee.

The CHAIRMAN. Now, before you leave, what is the pleasure of the committee if the Chief of Engineers recommends the inclusion of this item.

Mr. COSTELLO. We are framing this bill on his recommendations and if the necessity existed before and they can see it again, for my part I am perfectly satisfied. Our argument before the House and Senate is that this bill has the approval of the President and the War Department and that is why we are urging the passage of the bill.

The CHAIRMAN. Well, is it the pleasure of the committee that if the Chief of Engineers recommends this improvement that we shall include it. Mr. Lever himself is a very intelligent and most reasonable man. He said to me that if the Chief of Engineers could not recommend it he was for the bill.

(Mr. Switzer moved that if the Chief of Engineers recommends its inclusion it be included. Mr. Kettner seconded the motion. Unanimously adopted.)

The CHAIRMAN. In the report of Col. Newcomer in regard to matters about New York Harbor, everything seems to be finally settled except the matter of 40 feet at Hell Gate. Col. Newcomer has just this morning stated that, with the information before the chief at this time, he does not feel free to recommend that authorization for 40 feet, but he added that if the Navy Department expresses a desire that this improvement be made as an improvement necessary for the Navy that the chief would regard their recommendation as controlling the matter on the ground of military necessity.

Mr. DEMPSEY. I move that if for any cause the Chief of Engineers recommends that the improvement of Hell Gate should be made to 40 feet, upon the advice of the Navy Department, that the appropriate change be made in the bill.

Mr. DUPRÉ. I move that Mr. Dempsey's motion be laid on the table.

Mr. SWITZER. How much does that commit us to.

Mr. COSTELLO. I think, with this last addition to New York Harbor, involving about a million, and there is another appropriation that was increased in this bill, so that there is practically \$1,300,000 of an increase in these items outside of amounts that were agreed on in the previous bill that was lost in the Senate.

Mr. KETTNER. The total cost of the channel increased from 35 to 40 feet across Diamond Reef is \$3,300,000.

Col. NEWCOMER. I may have expressed the matter too strongly in saying that the Chief of Engineers would approve the request of the Navy Department.

Mr. KETTNER. Last evening I made a motion to authorize the chairman to introduce the bill. I renew that motion.

Mr. DEMPSEY. I withdraw my motion.

The CHAIRMAN. All of us want to show the utmost courtesy to every member of the committee. Certainly, the chairman does and will. I think our good brother Hulbert has been a little too insistent in going over the head of the Secretary of War to get the Navy Department to agree to something that they have not heretofore agreed to, but if he should come with evidence that the Navy Department does not wish this, then we can do nothing else except to ask the Chief of Engineers to consider it and make us a later report, and then it will be necessary to call the committee together and see what they will do.

Mr. DEMPSEY. Mr. Powers, of Kentucky, asked me if the committee had considered and allowed an appropriation for the upper Cumberland above Nashville.

The CHAIRMAN. I will just say this: We have included in this bill \$632,000 for improvement below Nashville, the same amount as in the last bill. Above Nashville there is in this bill \$5,000 for maintenance, but the last bill appropriated \$200,000, as it passed the House, for the section above Nashville, which is not included in this bill.

Mr. DEMPSEY. Of course, I am not at all familiar with the conditions there. I understand he wants that project started and some locks and dams constructed, which have been omitted and leave a gap in the improvement.

Col. NEWCOMER. We gave that project consideration, but we did not think it desirable to do that at this session.

The CHAIRMAN. Now, gentlemen, the motion of Mr. Kettner is that the chairman be authorized to report the bill as adopted by the committee and to use every effort to obtain its consideration in the House.

(Seconded by Mr. Switzer and carried unanimously.)

INDEX.

A.

Page.

Absecon Creek, N. J.	31
Agate Bay Harbor, Minn.	92
Alabama River, Ala.	76
Algoma Harbor, Wis.	94
Alloway Creek, N. J.	33
Alpena Harbor, Mich.	93
Altamaha River, Ga.	62
Amite River, La.	83
Anacostia River, D. C.	52
Anahuac Channel, Tex.	86
Anclote River, Fla.	70
Apalachicola River, Fla.:	
Channel through St. Georges Sound to Gulf of Mexico.	71
Channel to St. Andrews Bay	71
Appomattox River, Va.	54
Appoquinimink River, Del.	36
Aquila Creek, Va.	52
Aransas Bay and Pass, Tex.	86
Arcadia Harbor, Mich.	93
Arkansas River, Ark.	88
Ashland Harbor, Wis.	97
Ashley River, S. C.	60
Ashtabula Harbor, Ohio.	89
Atchafalaya River, La., Improvement from Morgan City to the Gulf of Mexico.	85

B.

Baltimore, Md.	46
Bartholomew Bayou, La., and Ark.	87
Bastrop Bayou, Tex.	86
Bay River, N. C.	57
Bear Creek, Miss.	80
Beaufort Harbor and River, N. C.:	
Improvement of waterway to Core Sound.	57
Improvement of waterway to New River.	57
Beaufort Inlet, N. C.	57
Waterway to Norfolk, Va.	55
Waterway to Pamlico Sound.	57
Beaufort, S. C., waterway to Savannah, Ga.	61
Bellingham Bay and Harbor, Wash.	102
Beverly Harbor, Mass.	20
Big Sunflower River, Miss.	80
Big Thoroughfare River, Md.	46
Biloxi Harbor, Miss.	80
Biscayne Bay, Fla.	67
Black River, La.	87
Black River, Mich.	93
Black Rock Harbor, N. Y.	25
Blackwater River, Fla.	71
Blackwater River, Va.	55
Blood River, La.	83
Boca Ceiga Bay, Fla.	70

	Page
Boeuf Bayou, La	87
Bogue Falia, La	87
Boston, Mass	16, 20, 151
Branford Harbor, Conn	21
Brazos River, Tex	5
Improvement of mouth	5-87
Bridgeport Harbor, Conn	21
Broad Creek, Md	46
Broad Creek River, Del	55
Broadkill River, Del	36
Bronx River, N. Y	23
Brunswick Harbor, Ga	15-62
Buffalo Harbor, N. Y	155
Improvement of channels in waters connecting Great Lakes	98
Burlington Harbor, Vt	22

C.

Calcasieu Pass and River, La	84
Caloosahatchee River, Fla	78
Calumet Harbor and River, Ill. and Ind	94
Cambridge Harbor, Md	46
Cape Fear River, N. C	59
Below Wilmington	59
Cape Vincent Harbor, N. Y	22
Carrabelle Harbor and River, Fla	71
Cascades Canal, Columbia River, Oreg	101
Cedar Bayou, Tex	86
Charleston Harbor, S. C	99
Charlevoix Harbor, Mich	98
Charlotte Harbor, Fla	70
Charlotte Harbor, N. Y	22
Chattahoochee River, Ga. and Ala	71
Cheboygan Harbor, Mich	98
Cheesequake Creek, N. J	31
Chefunctee River, La	83
Chehalis River, Wash	104
Chesapeake Bay and Delaware Canal, Del. and Md	5-19-38
Chester River, Md	46
Chicago Harbor and River, Ill	94
Channels in waters connecting Great Lakes	98
Chincoteague Inlet and Bay, Va	37-38
Chipola River, Fla	71
Chocolate Bayou, Tex	86
Choctawhatchee River, Fla. and Ala	71
Choptank River, Md	46
Clalborne Harbor, Md	46
Clatskanie River, Oreg	101
Clear Creek, Tex	86
Clearwater Harbor, Fla	70
Cleveland Harbor, Ohio	89
Clinton River, Mich	98
Club Creek, Ga	92
Cohansey River, N. J	53
Cold Spring Inlet, N. J	71
Coldwater River, Miss	80
Columbia River, Oreg. and Wash.:	
Cascades Canal	101
Cello Falls to Snake River, including tributaries, Improvement from	101
Cello Falls to The Dalles Rapids	101
Mouth	105
Vancouver, Wash., to Willamette River	101
Wenatchee, Wash., to Bridgeport	102
Compton Creek, N. J	31
Conecuh River, Ala	71
Congaree River, S. C	60, 158

	Page.
Conneaut Harbor, Ohio	89
Connecticut River, Mass. and Conn.	22
Consolidation of items	6-124
Contentnia Creek, N. C.	57
Cooper River (Creek), N. J.	33
Coosa River, Ga. and Ala.	76
Coos Bay Harbor and River, Oreg.	101
Coquille River, Oreg.	101
Core Sound, N. C., improvement of waterway to Beaufort Harbor	57
Corney Bayou, La.	87
Corpus Christi Bay and Harbor, Tex. (waterway Galveston to Corpus Christi)	86
Corsica River, Md.	46
Cowhead River, Ga.	62
Cowlitz River, Wash.	101
Crescent City Harbor, Cal.	115
Crisfield Harbor, Md.	46
Crystal River, Fla.	70
Cumberland River, Ky. and Tenn.	88, 160
Current River, Ark. and Mo.	88
Cuyahoga River, Cleveland, Ohio	89
Cypress Bayou, Tex. and La.	85

D.

Dalles-Celilo Canal, Oreg. and Wash.	101
D'Arbonne Bayou, La.	87
Darien Harbor, Ga.	62
Deal Island, Md., improvement of lower thoroughfare at Wenona	46
Debris, mine, in California	57
Deep Bay, N. C., improvement of waterways to Swan Quarter Bay	57
Delaware Bay and River, N. J., Pa., and Del.:	
Improvement of river, Philadelphia to the sea	34, 42
Lewes, Del., iron pier near Lewes	36
Des Cannes Bayou, La.	84
Detroit River, Mich.	93
Dickinson Bayou, Tex.	86
Dog River, Miss.	77
Dorchester Bay, Mass.	20
Double Bayou, Tex.	86
Duck Island Harbor, Conn.	21
Duluth, Minn.:	
Channels in waters connecting Great Lakes	93
Duluth-Superior Harbor, Minn.	92
Dunns Creek and Crescent Lake, Fla.	69

E.

East Bay Bayou, Tex.	86
East Pearl River, Miss.	80
East River, N. Y.	28, 117
Echo Bay Harbor, New Rochelle, N. Y.	4, 15, 19, 23
Elizabeth River, N. J.	31
Elk River, Md.	46
Escambia River, Fla.	71
Etterville-Minim Creek Canal, S. C.	60
Estimates of appropriations required	2, 124

F.

Fairport Harbor, Ohio	89
Fancy Bluff Creek, Ga.	62
Father River, Cal.	101
Fishing Creek, N. C.	57
Fleming River Harbor, Conn.	21
Ft. River, Ga.	71
Frankfort Harbor, Mich.	93
Freeport Harbor, Tex.	87

G.

	Page.
Galveston Bay and Harbor, Tex.....	86
Improvement of waterway to Houston.....	86
Waterway to Corpus Christi.....	86
Gasconade River, Mo.....	96
Gloucester Harbor, Mass.....	20
Grand Haven Harbor, Mich.....	93
Grand Marais, Mich.....	92
Grand River, La.....	82
Grand River, Mich.....	93
Grays Harbor, Wash.....	101
Grays River, Wash.....	101
Great Lakes, channels in waters connecting.....	93
Great Peedee River, S. C.....	60
Great Sodus Bay, N. Y.....	22
Green Bay Harbor, Wis.....	94
Greenwich Harbor, Conn.....	21
Grossetete Bayou, La.....	82
Grouping of items.....	6, 124
Gulfport Harbor, Miss.....	80

H.

Harbor Beach, Mich., improvements of harbor of refuge.....	93
Harlem River, N. Y.....	25
Hillsboro Bay and River, Fla.....	68
Hilo Harbor, Hawaii.....	102
Holland Harbor, Mich.....	93
Holmes River, Fla.....	71
Honolulu, Hawaii.....	102
Hoquiam River, Wash.....	101
Housatonic River, Wash.....	21
Houston to Galveston ship channel, Tex.....	86
Hudson River, improvement at New York.....	26
Humboldt Bay and Harbor, Cal.....	101
Huron Harbor, Ohio.....	89

I.

Illinois River, Ill.....	94
Indiana Harbor, Ind.....	94
Indian River, Fla.....	67

J.

Jacksonville, Fla., waterway to Beaufort.....	57
James River, Va.....	54
Johnsons Bayou, La.....	85
Jordon River, Miss.....	80

K.

Kahului Harbor, Hawaii.....	102
Kalamazoo River, Mich.....	93
Kenosha Harbor, Wis.....	94
Kewaunee Harbor, Wis.....	94
Keweenaw Canal, across Keweenaw Point, Mich. (Keweenaw Bay-Lake Superior waterway).....	92
Keyport Harbor, N. J.....	31
Key West Harbor, Fla.....	67
Kissimmee River, Fla.....	70

L.

Lafourche Bayou, La.....	82
Lake of the Woods, Minn.....	94
Lake Pontchartrain, La.....	93
Lakes, Great, channels in waters connecting.....	93

	Page.
Lake Washington Canal, Wash.....	102
L'Anguille River, Ark.....	88
Ia Trappe, Md.....	46
Lee Slough, Apalachicola River, Fla.....	71
Leipsic River, Del.....	36
Lewis River, Wash.....	101
Little Elk River, Md.....	46
Little Peede River, S. C.....	60
Little River, Del.....	36
Little Sodus Bay, N. Y.....	22
Lorain Harbor, Ohio.....	89
Los Angeles, Cal.....	13, 100, 156
Lower Chipola River, Fla.....	71
Lower Thoroughfare, Wenona, Deal Island, Md.....	46
Ludington Harbor, Mich.....	93

M.

Mackinac Harbor, Mich.....	93
Macon Bayou, La.....	89
Malden River, Mass.....	20
Mamaroneck Harbor, N. Y.....	23
Manatee River, Fla.....	68
Manchac Pass, La.....	83
Manistee Harbor and River, Mich.....	93
Manistique Harbor, Mich.....	94
Manitowoc Harbor, Wis.....	94
Manokin River, Md.....	46
Manteo Bay, N. C.....	57
Mantua Creek, N. J.....	33
Mare Island Strait, Cal.....	101, 107
Marquette Bay and Harbor, Mich.....	92
Mattawan Creek, N. J.....	31
Mattaponi River, Va.....	53
Maurice River, N. J.....	33
Meherrin River, N. C.....	55
Menominee Harbor and River, Mich. and Wis.....	94
Menominee River, Wis.....	94
Mermentau River, La.....	84
Improvement of waterway to Sabine River.....	82
Merrimack River, Mass.....	20
Miami Harbor, Fla.....	67
Michigan City Harbor, Ind.....	94
Milford Harbor, Conn.....	21
Milford Haven Harbor, Va.....	53
Milwaukee, Wis.....	94
Minim Creek-Estherville Canal, S. C.....	60
Minnesota River, Minn.....	94
Misphilton River, Del.....	36
Mississippi River:	
Brainerd to Grand Rapids, Minn.....	96
Head of Passes to Cubits Gap, dredging shoals.....	80
Head of Passes to Ohio River.....	5-19
Leech River.....	96
Missouri River to Minneapolis, Minn.....	6-95
Ohio River to Missouri River.....	95
Reservoir dams at headwaters.....	96
St. Paul, Minn., to Minneapolis.....	96
South Pass.....	80
Southwest Pass, Mississippi River.....	80
Mississippi Sound, Miss. and Ala.:	
Waterway to Sabine River.....	82
Horn Island Pass, Miss.....	77
Missouri River.....	6-97
Mobile Bay and Harbor, Ala.....	105, 158
Improvement of harbor.....	72
Improvement of channel to Mississippi Sound.....	72

	Page.
Mokelumne River, Cal.....	101
Monroe Harbor, Mich.....	93
Monterey Harbor, Cal.....	101
Morehead City Harbor, N. C.....	57
Mormon Channel, San Joaquin River, Cal.....	101
Murderkill River, Del.....	36
Muskegon Harbor and River, Mich.....	93
Mystic River, Conn.....	21
Mystic River, Mass.....	20

N.

Napa River, Cal.....	101
Narrows of Lake Champlain, N. Y. and Vt.....	22
Natalbany River, La.....	83
Nehalem-Bar and Bay, Oreg.....	101
Neuse River, N. C.....	57
Newburyport Harbor, Mass.....	20
New Haven Harbor, Conn.....	21
New Jersey, canal across State of.....	41
New London, Conn.....	21
Newport News, Va., improvement of channel to.....	52
New River, N. C.....	57
New York Bay and Harbor, N. Y.....	24, 42, 154
Nezperque Bayou, La.....	84
Nome Harpor and mouth of Snake River, Alaska.....	102
Nomini Creek, Va.....	52
Norfolk Harbor, Va.....	15, 19, 22, 104
Improvement of waterway to Beaufort Inlet.....	55
Northeast River, N. C.....	59
Norwalk Harbor, Conn.....	21

O.

Oak Bay to Port Townsend Bay, Wash., waterway.....	102
Oakland Harbor, Cal.....	101
Ocoquan Creek, Va.....	52
Ocmulgee River, Ga.....	62
Oconee River, Ga.....	62
Oconto Harbor, Wis.....	94
Ogdensburg Harbor, N. Y.....	22, 155
Ohio River.....	17, 18, 90
Oklawaha River, Fla.....	69
Olcott Harbor, N. Y.....	22
Oldmans Creek, N. J.....	33
Olympia Harbor, Wash.....	102
Ontonagon Harbor and River, Mich.....	92
Orange River, Fla.....	70
Osage River, Mo.....	96
Oswego Harbor, N. Y.....	22
Ouachita River, Ark. and La.....	87
Oyster Creek, Tex., improvement.....	86

P.

Pagan River, Va.....	54
Pamlico River, N. C.....	57
Pamlico Sound, N. C., waterway to Beaufort Inlet.....	57
Pamunkey River, Va.....	53
Pascagoula Harbor and River, Miss.....	77, 80
Pass Cavallo, Tex., improvement of channel to Port Lavaca.....	86
Pawcatuck River, R. I. and Conn.....	21
Pearl River, Miss.....	80
Peekskill Harbor, N. Y.....	24
Pensacola Bay and Harbor, Fla.....	71
Petaluma Creek, Cal.....	101
Petoskey Harbor, Mich.....	93

	Page.
Pittsburgh, Pa.....	33
Plantation Creek, Ga.....	62
Plaquemine Bayou, La.....	82
Plaquemine Brulé Bayou, La.....	84
Plattsburg Harbor, N. Y.....	22
Plymouth Harbor, Mass.....	20
Pocomoke River, Md.....	46
Ponchatoula River, La., improvement of Tickfaw River.....	83
Pontchartrain Lake, La.....	83, 106
Portage Lake, Manistee County, Mich., harbor of refuge.....	93
Port Aransas, Tex.....	86
Port Arthur Canal, Tex.....	85
Port Bolivar, Tex.....	86
Port Chester Harbor, N. Y.....	23, 155
Port Clinton Harbor, Ohio.....	89
Port Henry Harbor, N. Y.....	22
Portland Harbor, Me.....	151
Port Lavaca, Tex., improvement of channel to Pass Cavallo.....	98
Port Townsend Bay to Oak Bay, Wash., waterway.....	102
Port Washington Harbor, Wis.....	94
Port Wing Harbor, Wis.....	92
Potomac River, improvement at Washington, D. C.....	52
Provincetown Harbor, Mass.....	20
Puget Sound, Wash.....	102
Pultneyville Harbor, N. Y.....	22
Q.	
Queenstown Harbor, Md.....	46
Queue de Tortue Bayou, La.....	84
R.	
Raccoon Creek, N. J.....	33
Racine Harbor, Wis.....	94
Rappahannock River, Va.....	53
Raritan Bay and River, N. J.....	3
Red River, La., Ark., Tex., and Okla.....	85, 87
Red River of the North, Minn. and N. Dak.....	94
Redwood City Harbor, Cal.....	10
Redwood Creek, Cal.....	101
Rehoboth Bay, Del., waterway to Delaware Bay.....	37
Richmond Harbor, Cal.....	101
Roanoke River, N. C.....	55
Rockhall Harbor, Md.....	46
Rogers City Harbor, Mich.....	93
Rondout Harbor, N. Y.....	24
Rouge River, Mich.....	93
S.	
Sabine-Neches Canal.....	85
Sabine River, Tex.:.....	
Improvement of Sabine Pass Harbor.....	85
Waterway to Mississippi River.....	82
Waterway to Mermentau River, La.....	82
Sacramento and Feather Rivers.....	19-101
Saginaw River, Mich.....	93
St. Andrews Bay, Fla.:.....	
Improvement of bay.....	71
Improvement of channel to Apalachicola River.....	71
St. Clair Flats Canal, Lake, and River, Mich., improvement of channels in waters connecting the Great Lakes.....	93
St. Croix River, Wis. and Minn.....	94
St. Francis River, Ark. and Mo.....	88
St. Johns River, Fla.:.....	
Between Jacksonville and Palatka, including Orange Mills Flats.....	69
Between Palatka and Lake Harney.....	69
Jacksonville to the ocean.....	69
Waterway to St. Johns River.....	61

	Page.
St. Jones River, Del.....	36
St. Josephs Bay, Fla., improvement of entrance.....	71
St. Joseph Harbor and River, Mich.....	93
St. Lucie Inlet, Fla.....	67
St. Marys River and St. Marys Falls Canal, Mich., channels in waters connecting the Great Lakes.....	93
St. Marys River, Ga. and Fla.....	62
St. Petersburg Harbor, Fla.....	68
Salem Harbor, Mass.....	20
Salem River, N. J.....	33
Saline River, Ark.....	87
San Diego Harbor, Cal.....	13-15, 100-104, 156
Sandusky Harbor, Ohio.....	89
San Francisco Bay and Harbor, Cal.....	101
San Joaquin River, Cal.....	101
San Juan Harbor, P. R.....	102
San Luis Obispo Harbor, Cal.....	97
San Pablo Bay, Cal.....	101
Santa Rosa Sound, Fla., improvement of The Narrows.....	71
Santee River, S. C.....	60
Sapelo Bar and Harbor, Ga.....	62
Sarasota Bay, Fla.....	70
Satilla River, Ga.....	62
Saugatuck Harbor, Mich., improvement.....	92
Saugatuck River, Conn.....	21
Saugerties Harbor, N. Y.....	24
Savannah Harbor and River, Ga.....	61
Schuykill River, Pa.....	33
Scuppernong River, N. C.....	57
Section 2.....	124
Section 3.....	135
Section 4.....	139
Section 5.....	145
Section 6.....	146
Section 7.....	146
Section 8.....	146
Section 9.....	147
Section 10.....	147
Section 11.....	148
Section 12.....	148
Section 13.....	148
Sheboygan Harbor, Wis.....	94
Ship Island Harbor and Pass, Miss., improvement of pass and channel to Gulfport.....	80
Shoal Harbor, N. J.....	31
Shrewsbury River, N. J.....	31
Siuslaw River, Oreg.....	101
Skagit River, Wash.....	102, 156
Slaughter Creek, Md.....	46
Smiths Creek, N. C.....	57
Smyrna River, Del.....	36
Snake River, Idaho, Oreg., and Wash.....	101
Snohomish River, Wash.....	102
South Haven Harbor, Mich.....	93
Southport Harbor, Conn.....	21
South River, N. C.....	57
South River, N. J.....	31
Stamford Harbor, Conn.....	21
Steele Bayou, Miss.....	80
Stockton Channel, San Joaquin River, Cal.....	101
Stonington Harbor, Conn.....	21
Sturgeon Bay and Lake Michigan Canal, Wis.....	94
Suisun Creek or Channel, Cal.....	101
Sulphur River, Ark. and Tex.....	85
Sunflower River, Miss., improvement of Big Sunflower River.....	80
Superior Bay and Harbor, Wis.....	92

	Page.
Suwannee River, Fla.....	70
Swan Quarter Bay to Deep Bay, N. C., improvement of waterway.....	57
Swift Creek, N. C.....	57
Swinomish Slough, Wash.....	102

T.

Tacoma Harbor, Wash.....	102
Tallahatchie River, Miss.....	80
Tampa Bay and Harbor, Fla.....	68
Tar River, N. C.....	57
Tarrytown Harbor, N. Y.....	24
Tchula Lake, Miss.....	80
Teche Bayou, La.....	82
Tennessee River.....	89
Tensas River, La.....	87
Terrebonne Bayou, La.....	82
Texas City Harbor, Tex.....	86
Thames River, Conn.....	21
Thoroughfare Bay, N. C.....	57
Tickfaw River, La., improvement of, including tributaries.....	83
Tilghman Island Harbor, Md.....	46
Tillamook Bay and Bar, Oreg.....	101
Toledo Harbor, Ohio.....	89
Tombigbee River, Ala. and Miss.....	76
Toms River, N. J.....	31
Tonawanda Harbor, N. Y.....	25
Traverse Lake, Minn. and S. Dak.....	94
Tred Avon River, Md.....	46
Trent River, N. C.....	57
Trinity River, Tex.....	86
Tuckerton Creek, N. J.....	31-46
Turtle Cove, Tex., improvement of waterway via.....	86
Twitch Cove and Big Thoroughfare River, Md.....	46
Two Rivers Harbor, Wis.....	94
Tyaskin (Wetipquin) Creek, Md.....	46

U.

Upper Chipola River, Fla.....	71
Upper Machodoc Creek, Va.....	52
Urbana Creek, Va.....	53

V.

Vermilion Bayou, La., improvement of channel, bay, and passes.....	84
Vermilion Harbor, Ohio, improvement.....	89

W.

Waccamaw River, N. C. and S. C.....	60
Wappinger Creek, N. Y.....	24
Warroad Harbor and River, Minn.....	94
Warwick River, Md.....	46
Washington Bayou and Lake, Miss.....	80
Washington Lake, Wash.....	102
Wateree River, S. C.....	60
Water hyacinths, removal of:	
From Florida waters.....	70
From Louisiana waters.....	85
From Mississippi waters.....	85
From Texas waters.....	85
Waterways—Norfolk, Va., to Beaufort Inlet, N. C.....	55
Waukegan Harbor, Ill.....	94
Westchester Creek, N. Y.....	23
Westport Harbor, Conn.....	21
Weymouth River, Mass.....	20
White Lake Harbor, Mich.....	93
White River, Ark.....	88

	Page.
Wicomico River, Md.....	46
Willamette River, Oreg.....	101
Willapa Harbor and River, Wash.....	101
Wilmington Harbor, Del.....	35
Winyah Bay, S. C.....	60
Withlacooche River, Fla.....	70
Wolf River, Miss., improvement.....	80
Woodbridge Creek, N. J.....	31
Woodbury Creek, N. J.....	33

Y.

Yamhill River, Oreg.....	101
Yaquina Bar, Bay, and Harbor, Oreg.....	150
Yaquina River, Oreg.....	101
Yazoo River, Miss.....	80

Z.

Zippel Bay, Minn.....	94
-----------------------	----

O



73 -

RIVER AND HARBOR APPROPRIATION BILL

HEARINGS

ON

H. R. 10069

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

SECOND SESSION

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman.*

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRE, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

SAMUEL S. MANN, *Clerk.*

JOSEPH H. MCGANN, *Assistant Clerk.*

JANUARY 4, 5, 7, 8, 9, 11, 12, 14, 15, and 16, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

RIVER AND HARBOR APPROPRIATION BILL.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Friday, January 4, 1918.

The committee proceeded at 11.15 o'clock a. m. to hearing on the estimates, Hon. John H. Small (chairman) presiding.

STATEMENT OF COL. HENRY C. NEWCOMER, ASSISTANT TO THE CHIEF OF ENGINEERS, UNITED STATES ARMY.

The CHAIRMAN. First take up the Portland (Me.) district. There are no estimates for the Portland district. The first estimate is in the Boston district, for Boston Harbor, \$40,000 for maintenance. Colonel, will you state to the committee the purpose and necessity for that estimated appropriation.

Mr. FREAR. That is for maintenance?

Col. NEWCOMER. That is simply for maintenance; yes, sir.

Mr. KENNEDY. Did not we adopt a new project for Boston Harbor last year?

Col. NEWCOMER. Yes, sir.

Mr. KENNEDY. Why is not any estimate made for work on that project?

Col. NEWCOMER. It was not proposed at that time to prosecute the work, except possibly as it might be done in connection with maintenance from time to time. No appropriation was made when the project was adopted for its execution.

Mr. KENNEDY. I know that, but I supposed that when it was adopted in the last bill as an emergency measure, a recommendation would be made for an appropriation in this bill to prosecute the work.

Col. NEWCOMER. No appropriation was estimated for at this time, for the same reason that it was not estimated for at the time the project was authorized. It was not considered of sufficient emergency to require its prosecution under war conditions. You recall that the purpose of that project was to provide additional depth at the outer entrance to the harbor. We have got a 35-foot project, and it was thought it would be well in a harbor of as great importance as that of Boston to provide an entrance in the outer portion, where it is subject to all forces, which would permit boats to enter at all conditions of storm weather, so that they could pass through to the inner channels which provide 35 feet. Of course, by observing the tides, boats can do that now. It is simply a question of a few hours delay for them to come through even under storm conditions. For that reason it was not considered of sufficient importance to recommend an appropriation.

Mr. KENNEDY. What I had in my mind was, if it was thought of sufficient importance to incorporate in the last bill as a preparedness measure, certainly it would be of sufficient importance to appropriate funds for carrying on the work.

Col. NEWCOMER. The same argument, of course, applied last year, but it was not effective.

The CHAIRMAN. The next is the Newport, Rhode Island, district. The first estimate for an appropriation there is for New Bedford and Fairhaven harbors, Mass., \$15,000.

Col. NEWCOMER. That is, as you will observe, a very small amount required for the maintenance of channels that accommodate a very important commerce. It is only for maintenance that the fund is requested.

Mr. KETTNER. And necessary in this bill, in your opinion?

Col. NEWCOMER. I think it should be provided.

The CHAIRMAN. The next item in the Newport District contains an estimate for Pawtucket River in Rhode Island, of \$10,000 for maintenance.

Col. NEWCOMER. That is an extension, really, of Providence Harbor, and the project depth is 16 feet. That has shoaled somewhat and this estimate of \$10,000 is required to restore the project depth. In that case, also, you have quite an important commerce—over half a million tons annually.

The CHAIRMAN. The next is the New London, Connecticut, district.

Col. NEWCOMER. There are two items, Pawcatuck River the first item on the page is an estimate for \$2,500 for further improvement. The reason for that is that some bowlders have been discovered in the channel which should be removed in order to take full advantage of the channel depth that is generally available in the stream. You could not put it under maintenance, because being bowlders embedded in the bottom they have been there for some time—substantially always; the project, in other words, is not completed at this point. These few bowlders interfere materially, and we have thought it advisable to remove them.

The \$15,000 for the Connecticut River below Hartford, is for the maintenance of that 12-foot channel up to Hartford. They have there a very substantial commerce, and it is a river where shoaling takes place annually and funds have to be provided for its annual removal.

In New Haven Harbor, on page 5, there is an estimate of \$14,000 for maintenance, and similarly you notice there the commerce is very considerable, and it is important that you maintain the project dimensions. The same is true of the Housatonic River, \$8,000. You will notice quite a number of items here under maintenance where no funds are required; the amount on hand being considered sufficient.

Mr. FREAR. The amount appropriated in those cases ordinarily is about the same as the balances on hand. That is about an average amount that is spent?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next is New York district. The first estimate there is for East River and Hell Gate, \$2,200,000. We would be glad to hear from you about that, Colonel.

Col. NEWCOMER. Congress, at its last session, adopted the 40-foot project for East River and Hell Gate, and provided the funds for

the first step in the 40 foot depth through Diamond Reef, the channel from Upper New York Bay to Brooklyn Navy Yard, and only provided the funds that were necessary to afford a practicable channel of 35 feet through Hell Gate. The amounts requested here are for the further prosecution of the 35-foot work at Hell Gate, and to the east of that where a number of lumps or pinacles of rock have got to be removed. That is given in some detail on page 224, the total amount requested being \$2,500,000, of which \$300,000 is the balance of a continuing contract authorization.

The CHAIRMAN. Has the channel across Coenties Reef been completed?

Col. NEWCOMER. Not yet.

The CHAIRMAN. It was thought it would be completed last year.

Col. NEWCOMER. I did not know that had been expected. I think the contract time is not yet up. But there has been some delay and they are not making as good progress as anticipated. The drilling and blasting, I suppose, is three-quarters completed, but a small part only of the rock has been taken out.

Mr. FREAR. With \$1,832,000 on hand, you believe this \$2,200,000 ought to be appropriated at this time, do you?

Col. NEWCOMER. Yes; we consider that advisable, to appropriate that amount. That work, of course, is of a very expensive type, the removal of rock and, of course, the costs are very high.

Mr. FREAR. I mean it can be used at this time—that amount of money.

Col. NEWCOMER. Yes; we consider it can probably be expended in the time intervening between now and the next bill.

Mr. FREAR. We discussed the merits of it quite freely last time.

Col. NEWCOMER. Yes. I would like to explain to the committee the attitude the department has taken in regard to this improvement, because the point has been raised by Mr. Hulbert that we are not proceeding at once with the 40-foot depth through Hell Gate. You will recall the situation as it developed last year, that the committee at first proposed to authorize only 35 feet through Hell Gate and 40 feet through the channel to the navy yard from Diamond Reef, but due to the insistence of certain interests, and I think the Secretary of the Navy recommended it also, the committee concluded it should authorize the 40-foot project at that time, although I did not understand it was the intention or expectation of the committee that anything more than the provision of 35 feet through Hell Gate would be attempted now, because the estimate which was provided was an estimate for 35 feet. And in fact the naval board which passed on this matter of the channels required for the operations of the fleet of defense said 35 feet through Hell Gate, to be increased ultimately to 40 feet. I would like to have the committee observe the statement of the existing project, page 221. We have, after considerable thought, expressed the existing project and stated it as given there, and I would like to have the committee observe it.

"The existing project provides for a channel from deep water in the upper bay to the Brooklyn Navy Yard 40 feet deep and 1,000 feet wide";—

You see we provide there at once for 40 feet—

"for a channel from Brooklyn Navy Yard to Throgs Neck 35 feet deep, with widths varying from about 550 feet to 1,000 feet,

according to locality, to be deepened ultimately to 40 feet; for a channel east of Blackwells Island 20 feet deep and from 500 to 700 feet wide, to be deepened ultimately to 30 feet; for a channel 20 feet deep and 300 feet wide between South Brother and Berrian Islands; for the removal of Coenties Reef to a depth of 40 feet, local interests paying the cost of the work below a depth of 35 feet; for the removal of Corlears Reef to a depth of 30 feet, to be deepened ultimately to 40 feet; for the removal of north point of North Brother Island and of the rocks off Port Morris and Barretto Point to a depth of 35 feet, of Port Morris Shoal to a depth of 30 feet, of Rhineland Reef to a depth of 26 feet, and of isolated rocks to a depth of 30 feet; for giving access to wharves off the Battery and along the Brooklyn shore below Blackwells Island to a depth of 30 feet, and along the north shore below Blackwells Island to a depth of 25 feet; for two dikes, the one connecting Great and Little Mill Rocks and the other connecting the channel between Bread and Cheese Reef and Blackwell Island; and for the collection and removal of drift."

Now, we arrived at that statement of the project by basing it for immediate work upon the 40 feet through Diamond Reef, and for the rest of the work upon the project that was submitted by Gen. Black when he was the district engineer and which was adopted by Congress as one of the documents in last year's report, which called for 35 feet; and for most of those items that I have mentioned here, the ultimate deepening to 40 feet was superimposed upon that by virtue of Congress authorizing a depth of 40 feet, which we understood to be ultimately; not as an immediate procedure.

Mr. FREAR. In other words, Colonel, all these improvements are necessary in developing the harbor—that is, these various steps you have mentioned?

Col. NEWCOMER. Yes. It was quite a comprehensive document submitted, showing the needs of the various parts, and that was considered to be the basis for the work immediately to be undertaken.

Mr. SWITZER. All this would have to be done; that is, in finally obtaining the 40-foot depth.

Col. NEWCOMER. We understand that the question of when the 40-foot depth should be provided should be left to the future entirely; in other words, whenever circumstances develop which indicate a need for that, then the estimates could be submitted under authority already given, and Congress will determine, of course, whether it is ready to proceed with the 40-foot project.

Mr. FREAR. What was the reason for local interests being required to pay for the depth beyond 35 feet in the channel through Coenties Reef?

Col. NEWCOMER. That was some work that had to be done immediately. They are tunneling under the river, and that was some emergency work.

Mr. FREAR. Yes, I now remember.

Col. NEWCOMER. The local parties were driving this tunnel, and this rock the removal of which would have to be undertaken later, anyway, had to be undertaken at that time; and for that reason Congress took it up at that time and authorized the work to be done and the local parties agreed to pay the cost of deepening the channel below the 35-foot depth.

The CHAIRMAN. The recommendation at that time was only for 35 feet.

Col. NEWCOMER. Yes.

The CHAIRMAN. But in view of the fact that it was contemplated at some time in the future the project depth might be increased to 40 feet, and as this was over a tunnel under the river the city said: "In order to get the 40-foot depth now, we will pay the difference in cost between 35 feet and 40 feet."

Mr. KETTNER. Mr. Chairman, to clear up a point in my mind, the way I understand Col. Newcomer now is that the department has only recommended in this bill what is absolutely necessary for emergency purposes; in other words, they are putting off everything until prices become normal that does not affect the country at this time. Am I right?

Col. NEWCOMER. Substantially. In other words, in framing the estimates as they are in here in the annual report, we considered the funds on hand and the condition of the channel, as to whether emergency work was necessary or not, and the fact that the next appropriation would probably be available by the 4th of March, 1919. And in that way we made a substantial reduction in the estimates submitted by the district engineers. We made an effort to pare the estimates down to the lowest possible limit, and at the same time, however, provide what seemed to us to be essential for the present needs.

I might state in this connection that the high prices, the difficulty of getting men and materials, and the changes in organization incident to the war have all tended to impede our work somewhat. Take this work up there, for instance: Col. Taylor had charge of this East River work; at the outbreak of the war he was promptly taken away and sent over to France and the work was put in charge of an officer on the retired list. And, by the way, this officer's health has failed and he has had to be relieved and some other officer has been put in charge. And the same way with several other improvement works; there have been several important changes made in the last several months, and that, of course, all tended to retard our work.

The CHAIRMAN. These estimates we are now considering are the final estimates of the Chief of Engineers and they all represent reductions from the estimates of the district engineers, some more and some less, depending upon the conditions.

Col. NEWCOMER. Yes.

(Thereupon, at 11.45 o'clock a. m., the committee adjourned until to-morrow, Saturday, January 5, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Saturday, January 5, 1918.

The committee met at 10.30 o'clock a. m., pursuant to adjournment, Hon. John H. Small (chairman) presiding, and resumed the hearing on the estimates submitted by the Chief of Engineers.

The CHAIRMAN. I think we closed yesterday with the East River, did we not?

Col. NEWCOMER. Yes; East River and Hell Gate was the last item considered.

The CHAIRMAN. The next item is Hudson River Channel, New York Harbor, further improvement, \$200,000. Colonel, will you make the necessary comments on the Hudson River Channel.

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

Col. NEWCOMER. We are working now on the removal of the shoals along the Manhattan shore, between West Nineteenth and West Sixty-first Streets. That is a work that you authorized at the last session of Congress. We have two sea-going dredges working on that and have enough funds probably to complete that part. Another part of the improvement recommended and adopted at the same time is the widening of the main channel from Canal Street down to the Battery. There is a part of that channel where the width is less than 2,000 feet, which is considered essential for the movement of these big boats, and we have asked for this \$200,000 which will be applied on that work, for the widening of that channel. The estimated amount required to complete is about \$1,000,000. We only estimated for the \$200,000 at this time because we think that will be sufficient to carry those dredges through until the next appropriation becomes available.

The CHAIRMAN. How near to the shore line there are you dredging?

Col. NEWCOMER. We are dredging New York Harbor to the ends of the piers; that is, to the pierhead line. Of course, some of the piers may not come out to that. We dredge to the pierhead line, and all dredging inside of the pierhead line, of the slips, etc., is taken care of by the city.

This work we are now doing up there, you recall, provides for that big new pier which the city built, of sufficient length to accommodate the biggest boats afloat. You remember a great controversy up there about some big boats landing at the piers below, where they extended out into the waterway, or else they had to make extensions of the piers to protect them, and thus narrow the channel at that point.

The CHAIRMAN. Yes. When will the work be sufficiently completed to enable those large ships to approach that pier?

Col. NEWCOMER. That will be done, I think, in two or three months now.

The CHAIRMAN. That is regarded as rather important, to expedite that work?

Col. NEWCOMER. We are proceeding with that as rapidly as possible.

Mr. KETTNER. I understand the pier is finished.

Col. NEWCOMER. The pier is finished and the city is dredging in the slip alongside, and we are dredging outside to give access to the pier.

Mr. FREAR. I desire to make an inquiry, before we leave this other item. There is a star under that Hudson River item, where it is stated that \$235,000 is carried in the sundry civil bill. How does that come about; has the authorization already been made?

Col. NEWCOMER. Yes, sir; that item of \$235,000 in the sundry civil bill completes the contract authorization which was granted here a couple of years ago.

The CHAIRMAN. The next item is Narrows of Lake Champlain, N. Y., and Vt., \$200,000.

Col. NEWCOMER. That project was one of the new ones adopted in the last bill, and is one of the emergency projects, particularly for giving an outlet for the iron ores that come to Lake Champlain at Port Henry. The amount asked for is the amount we believe can be expended advantageously. You see it is a little less than half of the estimated amount required to complete; but that amount, and the amount on hand it is believed will serve the immediate needs and will put the work in quite fair condition. It will give the project depth throughout but less than the project width.

The CHAIRMAN. We now come to the second New York district, and the first estimate there is for the channel between Staten Island and Hoffman and Swinburne Islands, \$75,000.

Col. NEWCOMER. That item is for the improvement adopted in the last act, for which \$50,000 only was appropriated. This \$75,000 is necessary in order to carry the work as far as the first island. You remember there are two islands there that are to be reached by this quarantine service.

Mr. FREAR. Colonel, what have you to say about the importance of the last item of Lake Champlain compared to this one; that is, the importance between the two at this time.

Col. NEWCOMER. This one of Lake Champlain is one that was considered a war measure, and this is simply continuing that so as to make it more effective.

Mr. FREAR. You say "a war measure"; you mean recommended by the War Department?

Col. NEWCOMER. Especially recommended and included in last year's bill.

Mr. FREAR. I know it was included in last year's bill.

Col. NEWCOMER. It is a war measure particularly on account of the ore situation.

Mr. FREAR. You spoke about iron ore; from where does that come?

Col. NEWCOMER. It comes from near Port Henry. There are quite large deposits there.

Mr. FREAR. You think this is also important?

Col. NEWCOMER. I do. I consider it essential to carry on that work so as to get an effective channel. The amount we have already on hand will remedy one of the worst places on that channel. There is a very sharp turn, called the Elbow, where it is impossible to take large tows around, and we are going to get rid of that with the appropriation we have on hand; but to get the project depth throughout with reduced width we need this additional money.

Mr. FREAR. This says nothing has been done on that project yet.

Col. NEWCOMER. That is right.

Mr. FREAR. An appropriation of \$50,000 was made last time and \$75,000 is asked for now.

Col. NEWCOMER. You are talking about the next item.

Mr. FREAR. Yes. Why was not the whole appropriation for \$125,000 made or asked for? I mean, what is the purpose of dividing it up that way?

Col. NEWCOMER. It was substantially parceled out with the idea of distributing the amount to be given to New York Harbor. It was considered that this amount was all that could be spared at that time. Of course, that was really determined by the committee. You remember there were quite large appropriations made for New York and the committee thought that this work should be begun.

Mr. FREAR. Nothing has been done on it, however.

Col. NEWCOMER. Specifications have been prepared and the work advertised.

Mr. FREAR. Yes; but I notice that nothing has been done on the project.

Col. NEWCOMER. Yes, that is right.

The CHAIRMAN. The original report on this channel between Staten, Hoffman, and Swinburne Islands seems to indicate that the main necessity was to accommodate the quarantine station. And the suggestion has been made from some source, I forget what just now, that it has really a commercial value in addition. Are you informed as to that?

Col. NEWCOMER. I do not think it has any commercial value aside from its bearing on this quarantine service. It was alleged by some that the channel could be used for some of the coal boats from Perth Amboy around Staten Island; but I do not think this is a sound view.

Mr. KETTNER. I was informed that this channel was open now, while the other channel which has been used for the coal boats was frozen. Is that a fact?

Col. NEWCOMER. It is quite possible they may come around through the lower bay from Perth Amboy; but I do not believe they come through here at this particular point. That channel, I understand, remains open longer than the Arthur Kill, which is quite narrow and more apt to freeze over. But this particular channel, as you will find here on this map, does not lead anywhere except to this island, and it is necessary for the quarantine boats passing to and from the quarantine station.

The CHAIRMAN. The next item for which an estimate is made is Newtown Creek, N. Y.; \$15,000.

Col. NEWCOMER. That is simply for maintenance. It is a small sum, but there is a very big commerce.

Mr. KENNEDY. What is the condition of that harbor at the Flushing Bay project?

Col. NEWCOMER. What is the condition?

Mr. KENNEDY. What is the condition. Oh, I see: Getting a right of way; work suspended pending getting the right of way.

Col. NEWCOMER. I will have to look that up. I think that must be a mistake. I see that the point raised by Mr. Kennedy is explained on page 289 of the annual report. "Work on the project has been suspended pending the granting to the United States of a right of way in certain sections of the creek."

The channel comes up through Flushing Bay and then into Flushing Creek, passing through one or two bridges, and apparently there is a hitch there—certain rights of way that have not been granted in the creek above. That has not been brought to my attention in recent months at all so that I do not know the present status of it. I do

not think there is any particular urgency about it, because there are no steps in progress now of which I am aware.

The CHAIRMAN. The next item for which an estimate is made is Matituck Harbor, N. Y., \$5,000.

Col. NEWCOMER. That is simply the amount required, in addition to the funds on hand, to restore the channel to the project depth—an item for maintenance.

Mr. KENNEDY. I was just wondering what is the character of the work the city is doing in Jamaica Bay.

Col. NEWCOMER. The city has done very little. You know that was a case where the city prepared very elaborate plans for the development of a deep-sea port and the United States was to cooperate by providing the entrance and the main interior channel, and all of the subsidiary channels, wharves, piers, etc., to be built by the city. The United States adopted the project and appropriated a large sum of money. You see we still have quite a large balance on hand. We went ahead and provided the first step; in other words, provided an 18-foot entrance and an 18-foot channel inside, and the city did practically nothing. They were supposed to acquire the real estate there, and at that time the land was supposed to have very little value, so that the city could well afford to go in there and acquire this practically useless property. But as I understand, the city has acquired practically none of the property. They have gone ahead and built one subsidiary channel, but of small depth, however, 15 feet; so that the project, as it now stands, is not a satisfactory project, and the recommendation has been made—you will find it referred to on page 303—whereby the work will be carried forward on a less extensive scale than was originally contemplated.

Mr. FREAR. What is the object of continuing that when the city refuses to perform its part of the work, and is not that really a real estate proposition and so intended when it was put in, colonel?

Col. NEWCOMER. Of course, there have been charges made that it was a real estate proposition.

Mr. FREAR. I think they were fairly well substantiated.

Col. NEWCOMER. At the same time the city of New York and various substantial commercial bodies up there recommended the project, and had it been carried out as originally planned it doubtless would have been really of commercial value. But for some reason, I do not understand why, the city did not take the steps which it was expected to take. There is some commercial development there, but on relatively a small scale; in other words, only for handling local traffic instead of seagoing traffic.

Mr. FREAR. They have railroads across Long Island to this point?

Col. NEWCOMER. Oh, yes.

Mr. FREAR. What water transportation do they require under present conditions, when they wanted to use that for seagoing vessels?

Col. NEWCOMER. Like all industries around New York Harbor, they want to get water access for their products.

Mr. FREAR. What products do they have there?

Col. NEWCOMER. I do not know now just what industries are involved there.

Mr. KENNEDY. It says here it principally consists of garbage, refuse, road materials, etc.

Mr. FREAR. It is practically a dumping ground.

Col. NEWCOMER. Barren Island is one of the places where they have a refuse-disposal plant; that is just inside of the entrance. Of course that whole territory has developed rapidly. It is really an extension of Brooklyn, you know, and it is building up, and the traffic is in building materials and things of that kind. They also have an industry in there for which the city built one subsidiary channel, and what we propose now is to reduce the depth of this project from a 30-foot to substantially an 18-foot project.

Mr. FREAR. Are the engineers taking this upon themselves to make this modification, or has anything been presented to the committee?

Col. NEWCOMER. A recommendation has been made to Congress, published in House Document 554, Sixty-fourth Congress, first session, and also noted here in the annual report on page 553.

Mr. FREAR. That becomes a new project?

Col. NEWCOMER. Yes; proposes one.

The CHAIRMAN. They were required to ask authority of Congress before the balance of this appropriation of \$500,000 could be used.

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. I might say, in justice to our former colleague, Mr. Hulbert, that he has recently stated the mayor elect there and the city administration are in favor of the city doing its part in the further prosecution of this improvement.

Mr. KENNEDY. Is there any burden put on the city under the recommendations by the modified project?

Col. NEWCOMER. In the modified project?

Mr. KENNEDY. Yes.

Col. NEWCOMER. Yes, sir. It is proposed that the work proceed on modified lines under certain conditions of local cooperation which will limit the work done by the United States step by step with what the city does.

The CHAIRMAN. The new recommendation provides for local contribution to the extent of half the cost.

Did you make any comment on Mattituck Harbor?

Col. NEWCOMER. Yes; I explained that.

The CHAIRMAN. We come now to the third New York district. The only item in that district for which an estimate is made is the Shrewsbury River, New Jersey, \$10,000.

Col. NEWCOMER. That is required for maintenance. It is a channel which shoals annually and of course has to be redredged annually and is one that has an important commerce also—a very large passenger traffic in addition to a substantial tonnage.

The CHAIRMAN. Philadelphia district. The first item there, for which an estimate is made, is Delaware River, from Laylor Street, Trenton, to the upper railroad bridge, \$55,000, for further improvement.

Col. NEWCOMER. That is to complete the improvement which was authorized several years ago and has been in progress under considerable difficulties, because ledge rock in considerable quantities has been encountered which was not disclosed by the original survey; and that has increased the cost of the work. This is an increased cost entirely above the original estimate, and in addition to this we made an allotment last year, in order to keep this work going, out of the lump sum appropriation of March 4, 1915. And we still, in addition to that, will need this \$55,000 in order to complete. I might state

in that connection that the city of Trenton has spent a large sum of money to prepare a terminal to which this channel gives the approach.

The CHAIRMAN. And there has also been a considerable industrial development on the water front, has there not?

Col. NEWCOMER. Yes; the building of boat yards by the American Bridge Co., and, I think, the Standard Oil, is also concerned.

The CHAIRMAN. The mayor of Trenton, Mr. Donnelly, has been quite active in advocating the improvement of that river, particularly the part opposite Trenton, and has been very anxious to see this completed. Do you think this \$55,000 will complete the improvement?

Col. NEWCOMER. That is the estimate that the district engineer now makes and the best information we have on the subject is that it will.

The CHAIRMAN. Personally I think that is a work that should be completed as early as possible so as to give access to the terminal and wharves there. My information is they need it very much.

Col. NEWCOMER. They are very anxious to have that available at the opening of navigation in the spring.

The CHAIRMAN. The next item is Delaware River, Pa., N. J., and Del., from Philadelphia to the sea, \$450,000 for maintenance and \$650,000 for further improvement.

Col. NEWCOMER. That is the big 35-foot project for Philadelphia harbor, and the funds asked for is the amount that we consider it practical to use to advantage during the time preceding the next appropriation. The work is of great importance. You will notice in the maintenance charge here, of \$450,000, that the cost of maintenance itself is quite heavy. We have several Government dredges there continually employed in maintenance work.

Mr. KENNEDY. How long do you figure it will take you to complete that project?

Col. NEWCOMER. The district engineer submitted quite an elaborate report upon the proposition this last summer, indicating that the work can probably be completed within the estimated cost. You see there is about \$2,600,000 remaining. We are asking now for \$650,000 out of that, and we can ordinarily spend in the neighborhood of a million a year, so that in the course of three or four years we ought to be able to complete the original or new work on that project. We find it is going to involve some dike construction, however, that was not originally anticipated; in order to reduce the maintenance we must narrow the channel at some places by building dikes.

Mr. FREAR. What was the estimated maintenance charge?

Col. NEWCOMER. Three hundred and fifty thousand dollars was originally estimated for maintenance. We are now running somewhat beyond that; and we do not yet have the 35-foot channel complete.

The CHAIRMAN. Is this appropriation sufficient to maintain the organization of the Government fleet of dredges so that there will be no loss resulting by reason of idleness for the ensuing year?

Col. NEWCOMER. Yes, sir; this will provide for the operation of that plant.

Mr. FREAR. Another question right in that connection: What is the comparative cost to the Government of the work being done by the Government dredges and by private contractors—I mean gen-

erally speaking? As I remember it, it is hard to determine anything from the Government statement as to what the cost is with our own machinery. Of course we know what the contract price is with various companies.

Col. NEWCOMER. That is all given in the annual report.

Mr. FREAR. That is given?

Col. NEWCOMER. The cost of operation of the Government dredges and of course the contract prices is all given in the annual report.

Mr. FREAR. Does that include overhead charges and everything, figured in?

Col. NEWCOMER. Yes, we give that, including all. The last thing in this three volume report is a report of plant operation and you will find it in there, for every dredge, a full statement of its operations. In this case, for the year 1916.

Mr. FREAR. Does it state where it is working?

Col. NEWCOMER. It states where the dredge is working and gives full details as to the amount of materials removed and the cost, the overhead charges and all.

Mr. FREAR. That has reference—that amendment that was put in—to the additional increase charged private companies over the Government?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That is the reason I asked the question.

The CHAIRMAN. As I understand it, Colonel, whatever difference of cost there may be between dredging by the Government plant and by private contract varies on the different improvements and in different localities?

Col. NEWCOMER. Oh, very largely.

The CHAIRMAN. Dependent on local conditions?

Col. NEWCOMER. Yes.

Mr. SWITZER. What it cost two or three years ago does not have much bearing on what it would cost now, anyway.

Col. NEWCOMER. No.

The CHAIRMAN. And there are other conditions. So that it is quite difficult to arrive at any generalization as to the advantage or disadvantage, as to the cost, of the Government plants and private contracts generally.

Col. NEWCOMER. Of course you have to consider where this is being done, and it is frequently the case that the Government plant and the other plant may not be engaged on work of the same quality; and there is a variance in material and in difficulty of excavation. In this case, for instance, the Government plant is engaged on maintenance work simply, taking up the material deposited in the channel once excavated. The other work is for the original excavation. Just what difference that would make in this instance, I could not say offhand.

Mr. SWITZER. And on the first excavation, you may have to take out some rock?

Col. NEWCOMER. No, sir, no rock. We have one big rock excavation contract in Philadelphia Harbor, but that is handled separately.

Mr. OSBORNE. I notice the commerce is very heavy, twenty-eight or twenty-nine million tons, of a billion and a half dollars in value, and 250,000,000 passengers—evidently a very important highway.

Does this estimate, and so on, take into account the large increase of cost of doing all excavating, and all work of that kind, over what it was a year or two ago?

Col. NEWCOMER. We have attempted to take that into account. Of course we can not tell whether we have made adequate provision or not for those increases, but I think this will probably cover it, because that is for the maintenance of the Government plant and we can better estimate there what it will cost, than we can, of course, when doing the work by contract.

Mr. FREAR. Right in line with what I asked before: On page 4598 appears an item for one of the dredges in the Delaware River, and in that way, I suppose, a comparison can be made. It states the 22-cent average is what it cost by the companies.

Col. NEWCOMER. What page is that?

Mr. FREAR. Page 4598. Now where would we find the remaining dredges working upon the Delaware River, if we wanted to make comparisons? I do not know that it is important. These are given by names, and of course we have no knowledge where the different dredges are working and where can we find the different localities in which they are working?

Col. NEWCOMER. If you will look, Mr. Frear, on page 3847, there is a table about plants, a list of floating plants by districts. Then, if you will look for Philadelphia under that, you will find what plant there is in Philadelphia; then getting the names, you can go to the other table and get the operations. And then, in the district engineer's report, which is in the second volume, you will get a statement of all contract operations in force.

Mr. FREAR. I know as to that. Those names are given here?

Col. NEWCOMER. Yes.

The CHAIRMAN. Speaking of the Delaware River, there has been some difference of opinion in the past, not among the engineers that I know of, but in the public discussion, as to whether the cost for maintenance of that 35-foot channel would not be excessive; and the item of \$450,000 for maintenance during the ensuing year indicates that it is expensive. Are there any plans which have been matured, which it is believed will reduce that cost of maintenance when the channel is completed?

Col. NEWCOMER. Yes, sir. I just referred to a study that was made by the district engineer, indicating that by confining the channel within proper limits, varying in width of course as you go up the stream and depending upon the tidal flow, we can materially reduce the expense of dredging, for maintenance, by the construction of dikes. The expense otherwise would be very heavy, but would probably be justified even then, because the commerce is extremely important. But we believe we can bring that maintenance down within quite moderate limits by proper dike construction and a general regulation.

The CHAIRMAN. There has been some question—

Col. NEWCOMER. It was not expected originally we would have to go into that so extensively. The original project provided for the construction of only a few dikes.

The CHAIRMAN. One or more members of the committee have had some doubt about the question of maintenance, and I desire to have your opinion.

Mr. FREAR. I do not know that I have ever expressed myself.

The CHAIRMAN. It was not with reference to you. The members who spoke about the matter are not here to-day.

Mr. FREAR. I will say this: In the past I have had some correspondence with engineers who are very familiar with this matter, and very competent engineers, and the complaint that they made at that time was that we were employing suction dredges, and only increasing the depth of the channel, as I remember it, about one-tenth of a foot a year, and they made the charge that it was not a profitable way of handling the dredging. That is something that has come to mind, but something I never referred to here because I did not know. We do use suction dredges there?

Col. NEWCOMER. Oh, yes, indeed.

Mr. FREAR. And it is pumped right back near the channel, isn't it, so that it is liable to drift back? That is the criticism made there by this engineer I speak of.

Col. NEWCOMER. The material is put behind confining or retaining walls, or bulkheads, most of it. They have, however, to a certain extent, simply pumped overboard. That has been when there has been an ebb flow of the tide, the idea being that most of that would be carried outside of the channel; but some of it would go in the channel still. We are able to handle it very cheaply in that way, and the resulting increase in depth appears to have justified that method of operation.

There are only a few cases of that kind that I know of similar to the method employed on the Delaware, of the operation of suction dredges discharging overboard during tidal stages. But the results have justified that method of operation.

The CHAIRMAN. The next item for which an estimate is made is Schuylkill River in Pennsylvania, \$300,000.

Col. NEWCOMER. This is for continuing the 30-foot project in Schuylkill River which was adopted at the last session. It is expected that the funds on hand will provide somewhat less than the project depth up to the oil docks, which are some little distance up the river—will perhaps give the 30-foot depth as far as the navy yard, and then a 27-foot depth from there on up the stream for several miles. Of course we are going to provide the 30-foot depth as far as we can, and that \$300,000 additional was asked to continue that work at the same rate we originally estimated for.

Mr. FREAR. This is subject to the same suggestion I made a while ago, of \$300,000 on hand, and \$300,000 more asked for continuing the work, and no work has been done or contract made?

Col. NEWCOMER. Those figures relate to the beginning of the fiscal year, but as a matter of fact work has not yet been begun. The specifications have been drawn up, but there has been a little difficulty there about getting the city to accept the condition upon which the project was adopted, that pending the completion of certain sewage disposal works the city and the State should bear the expenses of maintenance. The funds should apparently be applied now in providing a channel of somewhat less than the full project depth and they seem to be shying at the maintenance of anything except the full project depth channel. But we take the ground, and I think properly, that any channel should be maintained there at the city's expense, pending the completion of the sewage disposal work.

but we have not yet had them accept that point of view. I think they will do that and the work can proceed very soon. We consider that is emergency work.

The CHAIRMAN. That is at Philadelphia Navy Yard.

Col. NEWCOMER. In fact, we asked the Contractors' Emergency Dredging Committee to assist us upon that work.

Mr. OSBORNE. This \$300,000 on hand, and the second \$300,000 would have to run you until June 30, 1919.

Col. NEWCOMER. Yes; or March 4, 1919. At least, we expect the appropriation under the new bill would be available by March 4, 1919.

The CHAIRMAN. The next is the short session, you know.

Mr. KENNEDY. The fund becomes available when the bill becomes a law.

The CHAIRMAN. We will now take up the Wilmington, Del., district. The first item for which an estimate is made is Absecon Inlet, N. J., for maintenance, \$20,000.

Mr. KETTNER. Mr. Chairman, I hope Col. Newcomer will explain that item. I was in Atlantic City last year, and I hope he will give a full explanation of why that work should be carried on.

Mr. KENNEDY. I was just wondering on what basis the engineer made that recommendation. You know we agreed to take that on for five years, with certain conditions attached. I do not know whether it was in view of the fact we made that statement, or whether it was on account of the commerce accommodated that the recommendation was made.

Col. NEWCOMER. Primarily on account of the project adopted by Congress to open up this channel and maintain it for five years, with a view to determining later whether the work should then proceed. The commerce, as a matter of fact, has not been extensive, but there has been an added value during the war, or since we went into the war, on account of the use of this as a station for patrol boats. There are a great many, of course, as you know, in use along the coast, and I understand this Absecon Inlet furnishes one of their harbors where they can get supplies, and it is sort of a home port, or port of refuge. The estimate of \$20,000 is simply based upon what we have on hand and the amount required to operate that dredge until the next appropriation becomes available.

Mr. KENNEDY. I notice in the engineers' report here, which gives the number of vessels, draft, etc., "5 to 7 feet and 5 to 8 feet." Of course they had plenty of water for vessels of that kind before they did any work at all there.

Col. NEWCOMER. No, sir.

Mr. KENNEDY. I think the report on which we based our action says that the survey showed about 9 feet, 8 or 9 feet. Now, as a matter of fact, when we adopted that project, the people of Atlantic City were over here and they agreed to put on a boat line and maintain it. They were so anxious about it that they offered to contribute some funds to carry on the work up there when the Government dredge was built. Now, as a matter of fact, there has not been any boat line on there since 1915. I was there for a month last spring, and I went down to the dredging boat and those fishing boats, and put in about half of my time along there trying to find

somebody who could see some benefit from the operation of that dredge, and I could not find anyone. They did not know who I was and I did not tell them who I was, but it looks to me like throwing away money.

Col. NEWCOMER. I did not understand there had been an entire absence of steamboat traffic, but the line originally started has since stopped operation.

Mr. KENNEDY. There are only little fishing fleets, which only need 6 or 7 feet of water.

Col. NEWCOMER. The statement here is that "the usual draft of loaded boats is 12 to 16 feet. The general character of the commerce for the current year was fish, oysters, clams, chemicals, horses, wagons, coal, machinery, farm produce, and general merchandise." I know we had quite a point about the value of the commerce, that came up last year.

Mr. KENNEDY. There is a statement here which shows the vessels sailing, headed "Absecon Inlet, N. J."

Col. NEWCOMER. That is in the second volume.

Mr. KENNEDY. In the second volume.

Col. NEWCOMER. What page?

Mr. KENNEDY. Page 2178. It gives the draft 5 to 7 feet and 5 to 8 feet.

Mr. KETTNER. Mr. Chairman, right there I wish to corroborate Mr. Kennedy's statement as stated. I was over to Atlantic City last year and met Mr. Kennedy while there, and I also investigated that project. I was informed that there had not been a boat running to New York for (I believe they said) a year at that time.

Mr. KENNEDY. You notice according to that table there they have given a good deal of data with regard to boats.

Col. NEWCOMER. If you will notice on page 2179 the statement is made that "a new line to these points is now being formed and is scheduled to operate in the fall of 1917."

Mr. KENNEDY. As a matter of fact, they told me the line had not been operated. Of course there was a great demand for vessels when the shipping conditions became acute, and I was informed that they took them off because it did not pay them while they were operating. If that is true, with the conditions at the present time, I assume they are not going to put on another boat line.

Col. NEWCOMER. It is quite possible.

Mr. KENNEDY. You could find out for us, could you not?

Col. NEWCOMER. I could find out whether or not they put on this line, which they expected to do.

Mr. FREAR. On page 2178 the draft of the largest boats is given as 5 feet 8 inches. Now, this project is completed—

Col. NEWCOMER. As I understand, it is 5 to 8 feet.

Mr. FREAR. Yes, 5 to 8 feet. The project is completed to 12 feet, and there is no large boat; and I can corroborate what these gentlemen have said, because I was at Atlantic City last year, and no steamboat goes in and out outside of that dredge, and there is nothing there in the shape of commerce except little fishing boats.

Mr. KENNEDY. The \$45,000 in the report was the amount estimated for by the engineers each year, was it not?

Col. NEWCOMER. That was the original estimated cost of operating the dredge.

Mr. KENNEDY. It says here this regular line was withdrawn in 1915.

Col. NEWCOMER. Yes. I do not think that the commercial value of this project has been demonstrated by any means.

Mr. KENNEDY. Oh, no. If they should want to put on another line and show their good faith, why you could put the dredge in commission there again, but it looks to me like it just fills up there and they are just going back and forth and it is not doing a particle of good.

Col. NEWCOMER. As a matter of fact the channel maintains itself fairly well, but it tends to shift its position and more or less work has to be done in that way.

Mr. KENNEDY. The only thing they have there are the fishing boats and sail boats which take the passengers out. I was up there for 30 days.

Mr. FREAR. By the way, Colonel, would it not be more important for the Government, at this stage, to use that great dredge at New York Harbor, or some of these important harbors, than down there at Absecon Inlet?

Col. NEWCOMER. The dredge has been used to a certain extent at other places.

Mr. FREAR. I would suggest that we let this project go for the time being and use that dredge where it is more important.

Col. NEWCOMER. We would not hesitate to transfer it if the need were sufficiently great. But the dredge is not a very good dredge for deep channels, because it is of very light capacity. It is an especially designed dredge to operate in shoal water, and they only have a limited capacity, and it is not an economical dredge to operate in seagoing channels, such as in New York Harbor. There might be some places such as those where we have in the past utilized this dredge.

Mr. FREAR. I talked with some of those people with regard to that dredge and it was a matter of amusement there because it was the only boat that goes in and out of that harbor. It goes away out in the ocean several miles to drop this dredged soil and is a joke and it is rather embarrassing to have an item of that kind in the bill, because we can not justify it.

Col. NEWCOMER. It is a matter for Congress to determine. We are proceeding on the basis that the experiment is to run for five years.

Mr. KENNEDY. I was just looking up the bill in which we adopted that project. I thought it incorporated that language in the item—that is, to try it for five years—but it seems like we are under no compulsion to continue it for five years, in view of the fact that the people of Atlantic City have absolutely failed to carry out their part of the agreement.

Mr. FREAR. They refused to put up the \$45,000, too, which was one of the inducements.

Col. NEWCOMER. I will make inquiry about the boat line to see whether that has been established.

Mr. OSBORNE. To what extent, Colonel, is the Navy using it for the purpose you stated, as a refuge for patrol boats?

Col. NEWCOMER. I could not speak in detail about that. I simply understood this was of advantage to them. I heard some remarks made by some one in the Department that the patrol boats could

make use of it. There is a very long extent of coast there. There is Cold Spring Inlet somewhat farther down, and with a somewhat deeper entrance, which is used by them extensively now. But this is farther North and a place where they can take refuge.

Mr. FREAR. Do you believe to cease this work would embarrass them in any way?

Col. NEWCOMER. I would have to speak with them to be certain about it.

Mr. FREAR. Will you do so?

Col. NEWCOMER. I will make that a part of the inquiry.

The CHAIRMAN. Are there any further questions about Absecon Inlet.

Col. NEWCOMER. I might state, before you leave that, that the new work was completed there practically in 1915; so that the period of five years, if it is observed, would extend to about 1920.

(The following report was received from the district engineer officer in response to inquiry made by Col. Newcomer:)

OFFICE DISTRICT ENGINEER,
Wilmington, Del., January 21, 1918.

THE CHIEF OF ENGINEERS, UNITED STATES ARMY,
Washington, D. C.:

1. Returned.

2. The steamship line between Atlantic City, N. J., and New York, N. Y., and Philadelphia, Pa., has not been reestablished, as a boat could not be secured. There is a company incorporated which will operate a line when war conditions permit.

The discrepancy in statements of draft is due to the fact that the regular commerce carriers given in the Chief of Engineers' report are of light draft, but the pleasure yachts, menhaden and mackerel fishermen, which use the inlet in large numbers, are of the deep drafts stated.

3. Inquiry of the commandant, fourth naval district, as to the use of the inlet by patrol boats produced the following information:

(a) No use has been made of Absecon Inlet by district patrol boats up to the present time. In the early part of the year Atlantic City was visited by patrol boats for recruiting purposes. No boats have been based on Atlantic City.

(b) It is thought, however, if practicable to use this inlet after the submarine chasers become available for district service, and that use may be made of the facilities existing at Atlantic City for patrol boats, for stress of weather, repairs, and supplies.

FRANK C. WARNER, *District Engineer.*

The CHAIRMAN. The next item for which an estimate is made is Wilmington Harbor, Delaware, \$30,000 for maintenance.

Col. NEWCOMER. That estimate is one that was reduced from an estimate of \$70,000 submitted by the district engineer. In all of these cases where reductions were made in the office of the Chief of Engineers, the district engineer was notified and asked to submit his views in case he thought the reduction was too radical or too heavy, and in this case the district engineer has requested that this amount be increased. He has asked to have it increased to \$60,000. His attention was drawn to the fact that we needed to provide for it only until March, 1919, and he then made a request for \$50,000. It appears the local interests have contributed somewhat to the cost of the work there. On page 409 of the annual report you will find a table giving the expenditures in recent years. The expenditure in 1917 amounted to about \$41,000, and as they had \$50,000 on hand it was thought an additional appropriation of \$30,000, giving \$80,000 altogether, would suffice. But it appears that \$10,000 additional

was expended in 1917, contributed by local interests, so that apparently the annual cost amounted to \$50,000 and that amount should be provided for next year.

Mr. KETTNER. You think this should be increased, then, to \$50,000?

Col. NEWCOMER. It should be increased to \$50,000.

The CHAIRMAN. The colonel recommends that this estimate of \$30,000 should be increased to \$50,000. We will take that matter up when we come to a consideration of the bill in committee.

Mr. FREAR. You spoke about a contribution by local interests. Does that have reference to the act which required the city of Wilmington to make a contribution?

Col. NEWCOMER. There was no act requiring a contribution by the city of Wilmington, but the city voluntarily obtained authority to contribute up to about 10 per cent. and they have now contributed about \$42,000, which comes pretty close to the amount they were expected to contribute.

Mr. FREAR. \$60,000 is the amount here, and I called attention once or twice to the fact that they made no contribution for a number of years. They have given something in the last year. have they not?

Col. NEWCOMER. Yes.

Mr. FREAR. Because I remember you spoke of that at that time, and this project was approved with the expectation they would make that contribution. At least, I so understood.

Col. NEWCOMER. It is my impression they undertook that after the project was originally adopted.

Mr. FREAR. After the project was adopted?

Col. NEWCOMER. I think so.

Mr. FREAR. But they are making a contribution at this time and showing a right disposition.

Col. NEWCOMER. Yes.

The CHAIRMAN. It was not a condition imposed by Congress but a voluntary contribution undertaken by them. But after they had undertaken it, Mr. Frear is right that we are insisting they should live up to it.

Mr. FREAR. Otherwise it is of no avail placing that in the bill that they are expected to make a contribution. I understand from you they are contributing.

Col. NEWCOMER. Yes. There were some figures given by the district engineer, but it was not observed when the annual report was printed that it did not include a money statement showing the local conditions. We should have had a money statement for the contributed funds as well as the United States funds. So that it does not appear just what was done.

The CHAIRMAN. The next item is for a waterway on the coast of Virginia, maintenance, \$1,000. Will you explain what that waterway is and what is the purpose of the estimate?

Col. NEWCOMER. That is a waterway leading South from Chincoteague Inlet, and it is a waterway that is subject to shoaling to a certain extent. We find that the available balance of \$1,400 or \$1,500 is not sufficient to restore the project depth. There is a considerable movement of small craft in that waterway, which fully justifies the small amount to restore the project depth, and \$1,000 was estimated for that.

The CHAIRMAN. I notice quite a considerable commerce there in that location, 123,000 tons.

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. That is largely oyster boats passing through.

Col. NEWCOMER. Yes, sir, and fishing craft.

The CHAIRMAN. Yes, I looked that up.

The next is the inland waterway from Delaware River to Chesapeake Bay. Can you inform the committee as to the status of the negotiation for the purchase or, in default of purchase, for the condemnation of that property, as authorized in the last act?

Col. NEWCOMER. Yes. The district engineer took the matter up with the manager or president of the private corporation which now controls that waterway and tried to get a price from them at which they would be willing to sell to the Government and they refused to name a price. They said if the Government wanted to purchase it was up to the Government to make an offer, and as that offer should be made, with the approval of the department, the district engineer made a report which we propose to send to the Secretary of War for his action, making an offer on the part of the Government. Of course, what action they will take upon receiving that we can not tell. The act provides if there is a failure to make an amicable agreement and to come to terms, condemnation proceedings will be instituted.

Mr. FREAR. They never have given any figures?

Col. NEWCOMER. No.

Mr. FREAR. Of course, when one expects to sell a property that has been unremunerative, I understand they do pay 4 per cent on the bonds?

Col. NEWCOMER. On the bonds, yes.

Mr. FREAR. When a man expects to sell a horse or a house he fixes a price on that. Is that a fair way of dealing with the Government, to expect the Government to make a bid?

Col. NEWCOMER. It did not seem to me so. At the same time, they take that view, and we have to meet it the best way we can. I made the statement that they never have indicated a price. I think, however, as a matter of fact, they have on several occasions indicated what they thought would be a fair price, but it was so far beyond what the Government would consider a reasonable price that the Government never attached any weight to it.

Mr. FREAR. About what was it?

Mr. KENNEDY. \$3,700,000.

Mr. FREAR. When this item went through the House the first time it was for \$1,300,000. That was increased in the Senate, I remember, to \$2,500,000.

Col. NEWCOMER. Yes. Those amounts were arrived at in some way in committee, I do not know how. The value made by the board that was asked to pass on the matter was something like two and a half million.

Mr. KENNEDY. I happened to be a member of the subcommittee of this committee when it agreed on that \$1,300,000. We arrived at that by figuring that the bonds of \$2,600,000, drawing 4 per cent, were outstanding, and they only made about one-tenth of 1 per cent above the interest charge on the bonds. We figured with a property of that kind that the bonds ought to be figured like any common

stock. There was no margin at all to go on outside of the 4 per cent, and we figured their value to be about \$1,300,000.

Col. NEWCOMER. In other words, you figured on an 8 per cent basis instead of 4 per cent.

Mr. KENNEDY. There was absolutely no margin whatever. Here is a railroad stock, for instance, paying a 6 per cent dividend, that earns twice the dividend on the common stock, for instance, and when it gets down so that they only earn just the amount of the dividend on the common stock, you will notice the price at which it sells means a return of about 8 per cent.

Col. NEWCOMER. Of course an assured return of 4 per cent there would hold the bonds practically at par, I should judge.

Mr. KENNEDY. No; they have no surplus money; no margin above the 4 per cent that they pay on the bonds.

Col. NEWCOMER. No; but that seems to be a fairly well assured 4 per cent.

Mr. FREAR. There is another element that enters into that—they were not keeping up the plant.

Mr. KENNEDY. No; they were not putting anything into it.

Col. NEWCOMER. I was interested to know that.

The CHAIRMAN. Mr. Kennedy, simply to have the record complete from both standpoints, the engineers in their reports, both the chairman of the Angus Commission and the latter report, estimated the value of this property to the United States at \$2,514,289.70. That was its appraised value to the United States for the purpose of acquirement and improvement into an adequate waterway.

Mr. KENNEDY. That was on the basis of reproduction that they figured.

The CHAIRMAN. Now, the item in the bill which was carried, as reported by this House, with due respect to those who made the calculation, to my mind was an arbitrary fixing of the amount; and a member of the committee at that time, but not now a member, who was very active in arriving at that, impressed me with being more anxious to fix upon some sum that would not accomplish anything than to get legislation which would be effectual—which I do not think is fair legislation. I am not questioning your motives in the matter, but the motives of another member.

Mr. FREAR. You say he is not now a member.

The CHAIRMAN. He is not now a member.

Mr. FREAR. That absolves all of us, I presume.

The CHAIRMAN. Yes; it absolves all of you. It always appeared to me that the basis upon which the engineers proceeded was the correct basis: that is, if you are going to purchase a thing, what is its value to the purchaser? Now the engineers have uniformly recommended as the best route for this waterway the one occupied by the existing Chesapeake & Delaware Canal, thus making it necessary to acquire that property if we were going to adopt the project for a waterway connecting Chesapeake Bay and the Delaware River. So that in any authorization it ought to have been an amount which was fair to the United States to authorize to be paid for its purchase.

Now, in the last act, as all members of the committee know, we authorized the Secretary of War to purchase, if he could purchase at a fair value; otherwise to condemn. So far as the attitude of

this canal company is concerned (and I only know of it from the records; I do not happen to know personally any of them), their attitude seems to have been difficult to understand—difficult certainly from the standpoint of the Government and difficult to understand from their viewpoint. Apparently they have not been anxious to sell and no progress has been made in negotiations by reason of their indifferent, obstructive course, with reference to the acquirement of this property. And I assume if the Government acquires it it will have to be done by condemnation. I do not want to say anything about the value of the improvement to the United States, because that is not pertinent at this time; that has been passed upon; but individually I do hope that some report will be made, either of purchase or condemnation, which will get the approval of Congress, so that this project can be gotten behind us.

Mr. FREAR. May I ask a question in connection with what the chairman has just said? Colonel, in your judgment, how long will it be before this canal can be of any value to the Government for naval purposes under present business conditions, providing the canal should be condemned at once? How long would it take to improve it so that we could use it for the benefit of the Navy?

Col. NEWCOMER. Of course, before you could provide any substantial additional facilities, it would probably take two or three years. The canal of course is open now to navigation and will accommodate traffic to a considerable extent. It is useful at once within the limits of the size of the locks and the draft of the canal. I do not understand that it is particularly important for the Navy. In other words, it is too shallow, even with the proposed increase in depth to 12 feet—it is too shallow for the movement of submarines or torpedo boats and things of that kind. The naval interest in it, would simply be like the ordinary commercial interests, for the movement of supplies.

Mr. FREAR. Then what is the apparent necessity at this time of pushing this project as a war measure. Is there any in your judgment?

Col. NEWCOMER. I did not understand that this was especially a war measure. It is a measure that has been considered urgent, commercially, now for a good many years, to release the traffic there now is on this waterway from the present burden of tolls, and also to make it more effective, because it is now hampered by the present inadequate lack of facilities and the small size of the locks.

Mr. FREAR. Of course at this time we are trying to hold down the bill and, I think, the chairman is doing so, to as moderate a figure as possible.

Col. NEWCOMER. You understand there is nothing in the bill for it.

Mr. FREAR. I understand, but there may be expenditures in the future.

Col. NEWCOMER. As I understand, that will come before Congress when the report is made on the agreed price or the price by condemnation, and then it will be for Congress to determine whether the time is ripe for purchasing the canal under those conditions.

The CHAIRMAN. So far as can be foreseen, it will not be received in time, for either the House or Senate, to consider its acquisition, by purchase or condemnation, during this session.

Col. NEWCOMER. It is not anticipated.

The CHAIRMAN. I will say, Mr. Frear, in answer to your suggestion, that there was a report made by the Army board of the military advantages, and Mr. McGann will get you a copy of it at any time. They consider the military and strategic advantage of it but state there must be a greater depth than 12 feet. So, as Col. Newcomer stated, its military value depends upon a larger depth than the project of 12 feet now recommended. And it was stated, and it seems to me conceded in all the reports, that 12 feet would answer, not completely but in a modified way, the demands of commerce, and would develop a very large commerce. The locks there at the present time are only 24 feet wide and barges have to be constructed to fit them. You will probably notice that the barges using the canal are very long and very narrow, the reason being that they had to be constructed to meet the size of the locks.

Mr. FREAR. I will add to what the chairman says that as I now remember the report it was suggested the canal could be utilized for the movement of troops at the rate of 4 miles an hour through the canal.

The CHAIRMAN. You must remember that is much faster than some troops are being moved now by rail. Is there any further inquiry along this line?

If not, we now come to the Baltimore district. The first item there for which an estimate is made is Baltimore Harbor and channels, \$100,000 for maintenance, and \$200,000 for further improvement. Colonel, will you kindly state how it is proposed to expend the appropriation for maintenance and also for improvement.

Col. NEWCOMER. That is explained in some detail on page 437 of the annual report. The funds appropriated for the new project which was adopted in the last bill will provide for a new channel, a 35-foot channel, in the Curtis Bay section of the harbor and for a partial provision of the 35-foot channel in the southwest Baltimore Harbor section. The additional fund of \$200,000 for further improvement is desired to continue the work on that channel in the southwest Baltimore Harbor and the \$100,000 for maintenance is simply required to remove the shoaling that has taken place in the channels, in order to maintain the project depths that have been provided hitherto.

The CHAIRMAN. There was a consolidation in the last bill of the work in the vicinity of Baltimore Harbor, which included Curtis Bay. What work has been done on the Curtis Bay project, or what is proposed to be done in the immediate future out of this appropriation?

Col. NEWCOMER. It is expected they will get the 35 feet at these important coal piers in the Curtis Bay section with the funds on hand and begin work on the channel in southwest Baltimore Harbor. That provides an approach to the Pennsylvania's new big piers. They have to do considerable work on the side channel in order to reach the main channel.

The CHAIRMAN. This is an important harbor, and the question will be asked as to whether these two estimates for maintenance and further improvement constitute all that can be provided and will be necessary to expend during the ensuing year.

Col. NEWCOMER. Yes, sir. That is based on the idea of what can be advantageously expended in the next year.

Mr. FREAR. Who owns the Curtis Bay wharves at that point, Colonel? They are not public wharves?

Col. NEWCOMER. The Baltimore & Ohio Railroad Co. is the principal owner. Of course there are other industries on Curtis Bay, but the railroad coal terminal is the most important.

Mr. FREAR. They are entirely owned, or controlled, by this railroad company.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. There are no public wharves whatever.

Col. NEWCOMER. I do not think there are.

Mr. FREAR. As I understand the recommendation of the Assistant Secretary of the Navy on that Curtis Bay project, it was desired to help secure oil from the Standard Oil people and others for use on the vessels?

Col. NEWCOMER. I think, Mr. Frear, it was required for those colliers to come to the coal docks.

Mr. FREAR. What protection have we, in a case like that, where there are no public wharves in a case of that kind, but when they belong entirely to a private company, and we dredge up to their wharves at an expense of several hundred thousand dollars, or more, and then are we not subject to all the regulations that they make for their wharves? I mean, ordinarily we make a different condition; that is, we say you must put in public terminals like at Philadelphia and New Orleans, public wharves. Now, here we are dredging right up to the railroad wharves with no condition imposed.

Col. NEWCOMER. That is a very common condition all over the country, that the wharves are in private hands. There are only a few of our harbors where the wharves are publicly controlled. Of course there is a public control that can come from the State commissioners and from the Interstate Commerce Commission. For instance, the Interstate Commerce Commission has thorough control over those terminal facilities of the railroad, so that you are not without defense against any unfair action of the railroad corporations.

Mr. FREAR. What city is it that has no municipal wharf, either at the present time or projected, unless at Portland; and I think they have arranged for that there.

Col. NEWCOMER. Take Boston, for instance: I do not know whether they have at Boston, or not, but Portland has no municipal piers.

Mr. FREAR. I am speaking about Portland—

Col. NEWCOMER. You mean Portland, Maine?

Mr. FREAR. Yes.

Mr. KETTNER. I believe Boston is building public wharves at the present time.

Col. NEWCOMER. That may be. New York, of course, has public facilities.

Mr. FREAR. It is good policy to endeavor to require the municipality to have public piers?

Col. NEWCOMER. Yes, and it is very desirable. Take in the case of Baltimore Harbor: I do not know to what extent they have any municipal piers, but the inner harbor has been improved entirely at local expense. They provided a 35-foot depth there, but I am not certain to what extent they own any piers.

The CHAIRMAN. As to Baltimore Harbor proper, the city of Baltimore has constructed very extensive and adequate terminals, and which are very satisfactory. If I personally should make any criticism, it would be as to the use they are making of those terminals. My last information was to the effect that instead of reserving some one or more of them for public or general use, that they had all been leased to the water transportation companies. I hope I am in error as to all having been leased, but I know that was stated. They have very fine terminals in Baltimore Harbor. I understand Mr. Frear's inquiry is directed to Curtis Bay, and I understand his statement to be correct as to Curtis Bay.

Mr. FREAR. Right in line with what the chairman suggests as the governmental policy, ought not these municipalities be required to keep some of those wharves subject to public use, rather than lease them? Of course, in the city of New York, for instance, the great majority of the wharves there have been leased to private parties, but these municipal wharves ought to be open to public use.

Col. NEWCOMER. As I understand, there are some in this harbor that are public, from what the chairman just stated.

Mr. FREAR. Where is the power lodged now to require the municipality to keep some of them open; with the Board of Engineers?

Col. NEWCOMER. Oh, no, sir. As I understand, the only power that controls these terminals may be some local organization or Congress. Congress, of course, can affix any conditions it may desire to attach to its appropriations.

Mr. FREAR. The Engineers, for instance, report upon some project that on the completion of terminal facilities by the city, which are to be given to the public, and then they advise that the project be undertaken by the Government. Now, after we improve the project, the municipality proceeds to lease these wharves. Where is the power to compel them to keep them open to the public as was originally intended when the project was started? That was my thought.

Col. NEWCOMER. I am not certain that such power is vested in anybody?

Mr. FREAR. It is a question really suggested in line with what we have been talking about. Because I remember the Portland case, and I have raised the question once or twice of the importance of inserting a proviso, because the Engineers had agreed on the strength of its being a public project.

Col. NEWCOMER. I do not think in the case of Portland Harbor, for instance, that they have made a condition that they shall construct any public piers. It is only that there shall be berthing space provided at some of the piers that will utilize the increased depth that is going to be given. And, as a matter of fact, it is going to be done by the Grand Trunk Railroad. Their piers are the ones that require it, and they are going to give the additional depth at the piers.

Mr. FREAR. Are no piers contemplated to be built at Portland, Me.?

Col. NEWCOMER. There are none building or contemplated that require this increased depth. They may have some piers there that are now sufficiently accommodated by the present project.

Mr. FREAR. I do not remember particularly, except Mr. Hinds made the statement in the House at that time that they were undertaking to put in public piers.

Col. NEWCOMER. I understand they have appointed a commission with a view to preparing plans for port development, but I do not understand they have formulated those plans yet. They have made no real, definite progress toward the construction of public piers.

Of course, I think it is well to bear in mind the fact that the Interstate Commerce Commission does have jurisdiction over this matter, so that any unreasonable practice or ruling made by a party controlling the terminal facilities of a railroad is subject to their supervision and control.

Mr. FREAR. What purpose is there, then, Colonel, of the Government or Engineers insisting that municipal wharves and municipal terminals be provided as a condition for putting the project through?

Col. NEWCOMER. Because it is very desirable as a matter of public policy to have those also.

Mr. FREAR. That is, of course, the purpose we had in mind.

Col. NEWCOMER. Yes. The other, I think, is very desirable, as you say.

The CHAIRMAN. I might supplement what has been said, by this statement. As to Portland, Me., there was in the recent past a movement to construct some municipal terminal there. What has been done, I do not know.

Upon the general subject of terminals, in response to the inquiry of Mr. Frear, it is my understanding that, as water terminals, owned by the railroads, they are under the jurisdiction of the Interstate Commerce Commission; and as to the municipal terminals, or public terminals, not owned by any railroad, but owned and regulated by the municipality in the interest generally of water transportation, as well as rail transportation, and the coordination of the two, that there has not been assumed, so far, any Federal jurisdiction over them. As Col. Newcomer says, Congress, in making the appropriations has the power to impose any conditions which it sees fit as to terminals; but whether Congress should go further and assume some regulatory jurisdiction over municipally owned terminals, with a view of assuring that they shall continue to be used by the public and shall not be monopolized by any specific steamboat line or by any specific railroad company, but continued for the public use, is a very interesting question. I would suggest that the chairman will consider it and will ask other members of the committee to study that question and see if the formulation of some law by Congress is not advisable.

Mr. FREAR. Otherwise, of course, as the chairman well suggests, if the Army engineers make the request or the requirement for the building of a municipal wharf, it might immediately be rented to a railroad company which had the exclusive frontage at Providence, or any of those places where we have insisted on this condition, and of course void just what the Army engineers desired to do—to give this port to the public.

The CHAIRMAN. Take the great port of New York, with its magnificent water frontage, piers, and terminals owned by the city: until recent years substantially all of them were leased either to private interests or to some common carrier, water or railroad. I understand now they are gradually getting away from that policy, and, as the leases expire they are reserving certain terminals to be placed

under municipal regulation and to be dedicated, more generally than they have in the past, to public use.

Col. NEWCOMER. While we are on that subject, it might be well to state what took place in Charleston Harbor.

The CHAIRMAN. That is Charleston, S. C.?

Col. NEWCOMER. Yes; Charleston, S. C. There an examination was made and an additional improvement recommended to deepen the project depth from 28 to 30 feet, coupled with a recommendation that the work should be conditioned upon improvement of the terminal facilities. The terminal facilities at the time the report was made, were of a quite inferior character, and it was thought that the Government was not justified in going ahead unless they did make more adequate provision for terminal facilities. It was then contemplated or expected that the municipality would take up that matter or handle it in some way. As a matter of fact, in the intervening years (the report was made about four years ago) the parties that were actually using the terminals there, the Southern Railway and other interests, have gone ahead and improved their terminals very materially, so that now they have first-class terminal facilities able to handle whatever traffic can come to the harbor, and the project was just adopted at the last session of Congress. The Secretary has recognized that the terminal facilities there have been substantially improved so that the condition originally contemplated has already been complied with and they are going ahead with the work.

The CHAIRMAN. But they are not municipally owned?

Col. NEWCOMER. They are not municipally owned.

Mr. FREAR. Does not this situation arise, and very vitally now, because the Government is interested in all these projects: If the railroad, which owns the wharves, so decides, they can be monopolized to the exclusion of any other business; they can be monopolized to the exclusion of any other boats?

Col. NEWCOMER. Yes.

Mr. FREAR. The Government, then, is putting in this improvement for the benefit of the railway and not for the benefit of the general public, as originally contemplated.

Col. NEWCOMER. Of course, you realize that the railways serve the general public.

Mr. FREAR. I understand that.

Col. NEWCOMER. Its traffic is not the only traffic that comes to the pier. There are a number of different terminals in Charleston Harbor. As a matter of fact, it might easily be that the best possible use that can be made of that pier is confining it to the use of the railway. That may fully utilize its capacity, just as in the case of the coal piers in Curtis Bay, for instance. They are built simply to handle coal brought in by that railroad, they can not handle anything else, and anybody who wants coal can come there and get it. And to make a provision that that pier should handle other goods, would obviously interfere with the handling of coal. So that quite possibly it may be perfectly proper and desirable to leave a pier in a private control because it is doing business which is serving the public.

Mr. FREAR. That may be so from the standpoint of the engineers, but I do not believe the people generally believe that is the purpose

in making these improvements, for the benefit of a railway company, notwithstanding they are incidentally serving the public. It seems to me it should be a permanent condition that the public shall have the right to the exclusive use of certain terminals and that was the purpose of the commissioner of commerce, who made a very extensive report on the subject some years ago. And it seems to me that was the purpose of the engineers, and therefore they began making requirements that public wharves be provided. Philadelphia and New Orleans and practically all of the large cities of the country have undertaken to do that, in line with that purpose, and not to have them owned by railroad companies for their exclusive use, but by the public at large, so that the public would have the right to use them under any circumstances and not be prevented by the railroad company.

Col. NEWCOMER. I understand the object to be to have not only one, but a number of wharves of that character, open for public and commercial purposes. But I do not think anybody would ever maintain that all commercial facilities, whatever their character, should be open to the public use for all purposes.

Mr. FREAR. Oh, no. That was not the suggestion. But they should have some positive rights, and they have none at Charleston, I understand, except such as are controlled by the railroads, and they have none at Curtis Bay.

Col. NEWCOMER. You know the great point at these harbors that we wish to conserve is that all traffic shall have just and reasonable treatment in the use of the facilities, and that although the wharves are privately owned, the terms for their use shall be equal to all parties. In other words, any boat can go and get coal from that coal pier; and the same way with the railroad pier in Charleston.

Mr. FREAR. They can subject to the prior rights of the railroad company.

Col. NEWCOMER. Subject to the prior right of the railroad company. It is only a question of service; in other words, of getting coal on equal terms.

Mr. FREAR. Every railroad company does business, for instance, with a particular line of boats, and these boats have the use of these piers because the railroads have the regulation in their own hands.

Col. NEWCOMER. I question very much whether that would be tolerated if they discriminate between particular boats.

The CHAIRMAN. Without intending in the least to minimize the importance of or lessen the attitude of the committee in insisting upon municipally owned terminals, this may be said with reference to railroad terminals that in the Panama Canal act the Interstate Commerce Commission, in furtherance of the coordination of traffic between water carriers and rail carriers, are given a power over railroad terminals by which, upon proper complaint being filed that any discrimination is made against any specific water carrier in the use of that terminal, a remedy may be applied by the Interstate Commerce Commission either prohibiting or commanding certain things to be done or not to be done, so that its use shall be given to all water carriers upon equal terms. So that if the public will assert their rights before the Interstate Commerce Commission, they can prevent any discrimination by railroads who own water terminals.

I do not think in any degree any port can be properly served by having all the terminals privately owned or owned by the railroads. Col. Newcomer has given the condition in Charleston. As a matter of fact, as shown by the report of the Chief of Engineers on terminals, made some four or five years ago (and which is worth reading and the Members should have it in their libraries), it appears that practically all the water front of Charleston is owned by a holding company, the stock of which is owned by the railroads which serve Charleston, and there is no municipally owned terminal in Charleston to-day; and perhaps (I am not sure upon that) if they desired to own a terminal they would have to acquire the water frontage from the railroads upon which to construct that terminal. That is a condition which ought not to exist, and I understand Col. Newcomer to be entirely in accord with the committee in this respect, that while we would not say that every terminal at a port should be publicly owned there should be enough terminals municipally owned and regulated for the use of the public to answer the demands of the public.

Mr. FREAR. The Chairman has stated that very clearly.

Mr. KETTNER. Mr. Chairman, I think you have just made a statement that will cause a great many members, providing they have an opportunity, to vote for the Government ownership of railroads in this country.

Mr. OSBORNE. There is one thing I want to get clear in my mind. I think I agree with Mr. Frear in a general way, but there is this fact, that most of the municipally owned terminals and wharves are (not altogether, but partially) leased to transportation companies. It is quite natural that the first thing a steamship company wants upon going into business in a new field is a wharf, and they have to have it; they can not do business without it. And naturally the use of terminal facilities is put into the hands of those people who have use for them, namely, transportation companies.

I think the cities ought to hold a sufficient wharfage to accommodate the transient business; that is, what is known as tramp steamers, and so on. And in our country, at Los Angeles harbor, that condition prevails. They have ample wharf facilities of a very substantial and expensive character, just completed, and they endeavor to meet the demands of transportation—leasing to established companies certain wharves and reserving for transient business other wharves—and that seems to me to be the ideal condition, so that no independent line or independent steamer shall be deprived of wharf facilities and, at the same time, that the regular transportation organizations shall be enabled to do business at the lowest expense to them and necessarily the least expense to the public.

The CHAIRMAN. Let me contribute this thought along that line. The old idea as to wharves and piers and terminals was that any individual having the necessity for the use of a wharf should own it individually. The same thought applied to any corporation; the same to any steamboat company; the same to a railroad company having a necessity for a terminal. But the trend is away from that now. The thought now is that the public shall provide the terminals, because the use of the terminals is a public necessity. It involves transportation, in which the public is interested. And, if I understand the committee, I think the proper attitude toward terminals is this—that

they shall be owned by the public, and that all who have use for them, whether rail lines or water transportation lines, shall have the privilege of using them upon equitable terms. Take Los Angeles, for example, where you have constructed very fine terminals, and in many respects they are very modern. I understand in Los Angeles that the municipality has not leased or given the exclusive use by lease to any one transportation line——

Mr. OSBORNE. Oh, no; I guess not.

The CHAIRMAN (continuing). Of any part of a terminal; but to your regular transportation line you do give the use of that terminal upon fair terms.

Mr. OSBORNE. That is what I mean.

The CHAIRMAN. And you are illustrating this modern trend of thought at Los Angeles. You have a public terminal there, and you give the use of it not only to any regular line of water transportation but to any tramp vessel which may come in. Anybody may have the use of that terminal by complying with the regulations imposed by the municipality. Neither do the railroad companies which serve Los Angeles have any exclusive use of that terminal.

Mr. OSBORNE. No.

The CHAIRMAN. And you have a belt line which I think is municipally owned, is it not; that is my recollection?

Mr. OSBORNE. Yes.

The CHAIRMAN. And any of the cars serving Los Angeles may use that belt line and have the use of the terminal?

Mr. OSBORNE. That is correct.

The CHAIRMAN. So that in your city you are illustrating the attitude of this committee, as I understand the committee, toward water terminals; and we ought to get away from the thought that water terminals are private property. They are public and they ought to be public property—publicly owned and publicly regulated.

Mr. FREAR. And one great reason for that outside of public service, Mr. Chairman, is that the Government has expended a billion dollars or over nine hundred million dollars in improving waterways for the public—not for private interests—and of course they are paramount, the public interests.

The CHAIRMAN. The next item for which an estimate is made is Wicomico River, Maryland, \$3,000 for maintenance.

Col. NEWCOMER. That is simply to provide for the annual shoaling. It is one of the cases where shoaling takes place gradually, continuing from year to year, and we have to remove it. That is the last item in the district.

(Thereupon the committee adjourned to Monday, January 7, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS.

HOUSE OF REPRESENTATIVES.

Washington, D. C., Monday, January 7, 1918.

The committee met at 10.30 a. m., Hon. John H. Small (chairman) presiding, and resumed hearings on the estimates.

The CHAIRMAN. We begin this morning with the Washington (D. C.) district. The first item for which an estimate is made is the Potomac River at Lower Cedar Point, Md.

Colonel, in discussing the Potomac River, some question may arise as to why no estimate is made for the remaining part of the river. Will you kindly present your views on that, too?

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

Col. NEWCOMER. I was just about to recommend that an estimate of \$5,000 for the maintenance of the Potomac River at Washington be inserted. The district engineer originally put in an estimate for \$8,000 there, but we felt, on account of the funds on hand, that probably that could be omitted. He submitted a supplemental statement, however, indicating that we could reduce the amount to \$5,000, but stated that \$5,000 was really essential in order to take care of the channels up to March 4, 1919. So that I would recommend an insertion of \$5,000 for the Potomac River at Washington, for maintenance.

Mr. BOOHER. You think we ought to put in \$5,000.

Col. NEWCOMER. I think we ought to put in \$5,000. I think that amount should be provided for the Potomac River at Washington for maintenance. The \$3,000 at Lower Cedar Point is necessary in order to remove a portion of the shoaling in the channel there; not to restore the full project depth, because apparently the boats can get along with the minor amount of work. There has been no work done there for a number of years, and shoaling has proceeded to such an extent that this moderate amount of work we feel is necessary to restore the channel to a fair condition. Occoquan Creek is one where the shoaling takes place from year to year, regularly. It requires a greater expense for maintenance than the other. We need \$3,000 there.

That would make a total for the Potomac River and its tributary channels of \$11,000, if allowed, instead of \$6,000.

The CHAIRMAN. The next is the Norfolk, Va., district.

Mr. DEMPSEY. May I ask the chairman if anything has been done with reference to the New York items, 6, 7, 8, and 9.

The CHAIRMAN. No action has been taken with regard to any work. We are simply going over each recommendation there for maintenance or further improvement, and then the committee will come back to them later on and decide upon what action is to be taken.

In the Norfolk district the first item for which an estimate is made is Norfolk Harbor, \$1,134,000 for further improvement.

Col. NEWCOMER. The last act authorized the 40-foot channel to the navy yard at Norfolk and provided \$900,000, which it is expected will give 40 feet for a width of about 250 feet through Thimble Shoal Channel—the outer channel—and about 150 feet through the inner channel, which is the one known as Norfolk Harbor proper. And with the additional amount asked for here for the inner channel it is expected to widen out that 150 feet to a width of 400 feet. The ultimate width is to be 750 feet. We are trying first to get a practicable through channel with the funds on hand, and that, of course, to be widened as promptly as can be; and we thought this amount should be spent during the next year to widen it.

Mr. BOOHER. To 400 feet.

Col. NEWCOMER. The present channel is a 35-foot channel, 400 feet wide, and we expect to deepen that to 40 feet with these funds. And the same way with the Thimble Shoal Channel—the present channel is 35 feet deep and 500 feet wide. The available funds will deepen it to 40 feet for a width of 250 feet, and this \$600,000 is the amount estimated to be required to widen that out to the present width of 500 feet, 40 feet deep. The total is a million and a half for Norfolk Harbor.

The CHAIRMAN. Was there any estimate made for the channel to Newport News?

Col. NEWCOMER. The channel there is now in a fair condition. It is a 400-foot channel, 35 feet deep. There has to be a widening of that channel later on, but we felt all the funds now should be devoted to the widening of this other channel. That is to be widened to 600 feet, I think, under the project that has been adopted by Congress; but that is not as urgent as the other.

Then I am sorry to say I have quite an important amendment to offer to the committee in the Norfolk district. There are no other estimates, you see, either for maintenance or improvement, for the balance of the work in this district. The inland waterway from Norfolk Harbor to Beaufort Inlet should have a substantial additional appropriation made in order to complete the first section from Norfolk to Albemarle Sound. You will recall the situation there, that the Government has bought the Chesapeake & Albemarle Canal and is enlarging it. There is still the ruling depth at the lock of 8½ feet. It is to be improved to a 12-foot channel, and substantially all traffic is now going through Dismal Swamp Canal and paying the tolls there. It was thought last year that we had enough funds appropriated to complete it. But the district engineer has just made a report, which came in, I think, about two weeks ago, indicating that we would need a substantial amount of money in order to complete that section. That is explained partly by the marked increase in prices and partly by the much more difficult character of the work than was anticipated. For much of the work they find they encounter large cypress stumps. This is a hydraulic dredging proposition, and while they have to blast to remove the bigger stumps, the smaller ones are chewed up, and it is necessary to open up the pumps of the dredges in order to remove this excelsior that accumulates in them before they can go ahead. The consequence is that the work has proved to be more expensive than was anticipated. The district engineer tried to get the contractor, who has a part of this work now under contract, to include in his contract some of the work set aside or which was expected to be done with the Government dredge—the Government dredge doing some work now in connection with the fortifications there—but he refused to do it, because it was of such an expensive character. We are now paying from 14 to 16 cents, which was estimated to be the cost; but he estimates that the work may cost as much as 20 cents a yard. His estimate, arrived at in this way, is \$448 000 for the completion of that section. It is important not only to complete this section but also to clear up the question as to the next section between Albemarle and Pamlico Sounds, where Congress has authorized a change of route in accordance with our recommendation—has authorized it in the discretion of the Secretary

of War; has not directed it. This has left the matter open to be determined dependent upon securing rights of way at a reasonable cost. That matter is now being investigated. Congress has ruled in the law that not more than \$75,000 should be expended on the rights of way, and it is hoped to get the necessary land rights for less than that sum. I therefore recommend an item of \$500,000 for the completion of that section of the waterway.

Mr. BOOHER. Is that canal mentioned here on that page?

Col. NEWCOMER. It is about a fourth of the way up from the bottom of the page—"Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C."

The CHAIRMAN. The members of the committee will remember, when we were formulating the last bill, it was decided to complete this first section from Norfolk to Albemarle Sound, and it was thought there was enough money carried in the last bill, which was \$100,000, you will remember, for completing that section and also acquiring these rights of way. And, as Col. Newcomer has explained, they have not enough money to complete that first section from Norfolk to Albemarle Sound and make the detailed surveys necessary to definitely locate the right of way of another section between Albemarle Sound and Pamlico Sound, and for that reason he makes this additional estimate or recommendation. The Chief of Engineers, through Col. Newcomer, when we had the last bill under consideration, recommended that the further construction of this waterway, after completing the section from Norfolk to Albemarle Sound, be held in abeyance—certainly at that session and possibly pending the war. That was a great disappointment to those people there, but you gentlemen will remember there was a cordial acceptance of the recommendation of the Chief of Engineers at that time, so that this estimate, I will call the attention of the committee, is necessary in order to carry out what the committee intended to carry out by the appropriation of \$100,000 in the last bill, but which was not sufficient.

Mr. DEMPSEY. Do I understand this increased amount is to be used in the purchase of rights of way?

Col. NEWCOMER. No, sir.

The CHAIRMAN. It does not disturb that in any way.

Col. NEWCOMER. This item, of course, would have been included in the annual estimates as printed had we known the situation when they were prepared. There has been an expenditure of about two and a half millions there.

Mr. DEMPSEY. I think it ought to be completed as soon as possible.

Col. NEWCOMER. You will note there has been an expenditure already of about two and a half millions there.

Mr. DUPRÉ. About when is this data collected on which these reports are made and transmitted to Congress?

Col. NEWCOMER. They are prepared primarily by the district engineer.

Mr. DUPRÉ. I say about what time?

Col. NEWCOMER. In July.

Mr. KENNEDY. I notice in some of these reports here, where the statistics are given, there is not much uniformity in the plan adopted by the district engineers. For instance, in some cases, like the James

River and Absecon Inlet, they give the number of boats, the draft, etc. Why isn't it possible to do that in all instances?

Col. NEWCOMER. The instructions call for that. They are supposed to indicate the different classes of traffic and arrange those different classes so as to know to what extent the depth provided by the project is actually required by the commerce; how much of the commerce is really using the full depth. We try to get that information, and I think you will find we are getting it more and more from year to year. It is very hard to get uniformity in these matters, and sometimes difficult to get the information.

Mr. KENNEDY. Why wouldn't it be well also to segregate the freight carried by the ferries, for instance. You give the number of passengers carried by the ferries, but you do not designate the amount of freight carried by ferries. Now, that is important, from the statements you made a minute ago—from the viewpoint that there is no use in providing for a complete channel when a good part of the stuff is ferried across the river.

Col. NEWCOMER. If the most of the commerce is ferried across the river, that should be indicated, but we have, also, ferries which proceed up and down a river for 20 or 30 miles, and, of course, they require a channel in the river just the same as the other commerce.

Mr. KENNEDY. In the Mississippi River I see two items, for instance, in the commercial statistics there, where there are automobiles or teams carried a mile, or a mile and a tenth, across the river, which makes over \$50,000,000 of the \$97,000,000 worth of commerce. Now, that is just two items. It looks to me like we ought to have those matters segregated, so that the committee can understand what part of the traffic is carried up and down the river.

Col. NEWCOMER. Don't they, in that item, as it is given there?

Mr. KENNEDY. We understand that the balance of the \$97,000,000 is for commerce carried up and down the river; but there might be a lot of other stuff in there which we can not segregate. For instance, take where I live; there is a ferry between where I live and Nauvoo, Ill.; according to these statistics they take the value of every wagon loaded with merchandise that goes across there and every team that takes a wagonload of coal across. Now, all those 15,000 or 18,000 people have to get their fuel from our side.

Col. NEWCOMER. Of course, that should appear.

Mr. KENNEDY. It should appear, and it should appear in a way that everybody could understand what it means.

Col. NEWCOMER. I am thoroughly in sympathy with that idea that we should know exactly what is being done. We do not want any camouflage in the commercial statistics.

Mr. KETTNER. Can this committee take any action to see that it is done?

Col. NEWCOMER. That question of commercial statistics is one of the most perplexing with which we have to deal, because there is no law now which requires manifests to be made out for all the movement of freight. There is, you know, for the foreign shipments and, I think, for the shipments between the two coasts that go through the canal, but not for the ordinary case of coast-wise shipments and those on the rivers and in the interior. No records required for the movement of freight there. We simply have to get that, when the companies are willing to give it to us.

at the end of the year. Many of them do not keep their books in such shape as to enable them to do that satisfactorily. Where the traffic goes through a lock they are required to do it, and we do get a report all the time; we get that on each movement in those cases. But where there is no lockage, but simply a movement from point to point, we do not have our agents following up this thing all the time. It would be a very expensive proposition to do that, and we have been studying for a long time on the proposition of how to secure the statistics of such movement, but we have not been able to devise a program which did not seem to be too burdensome and yet permit us to get the results. But we are getting results now which I think are fairly indicative of what is being done, though we can not vouch for their accuracy.

Mr. KETTNER. The reason I mentioned that—I will mention my home town because my people objected, and said it was impossible to get these records. I informed them they would have to do so if they expected help from the Congress. The result is for a year and a half I have submitted to your office a municipal manifest giving everything in detail—which shows it can be done.

Col. NEWCOMER. Wherever you have a man in charge as in that instance, that can be done. But are you sure that all of the traffic of that harbor is reported for the other piers as well as for the municipal pier?

Mr. KETTNER. No.

Col. NEWCOMER. That is the point. You have a man in charge of the municipal pier and wharf to do that, to keep a close and accurate account; but if there is no individual in charge who has that duty to perform, you can not get it.

Mr. KENNEDY. Isn't there any law requiring accounts to be kept on the part of ferryboats, so that they can make an accurate report of the tonnage to the War Department?

Col. NEWCOMER. There is a law which simply provides, in general terms, that those parties shall make returns when called upon. And we have called upon them and sometimes have even gone to the extent of prosecuting them under the law so as to get the returns. But if they do not have them, if they do not keep them, you can not extract them from them, of course. And there is no law which will require them to keep those returns; it is only as they may happen to have information of the character you ask for that they can give it. And we often feel very doubtful as to just how carefully their statistics are prepared.

Mr. KENNEDY. Let me ask you another question. For instance, as I stated a minute ago, a ferryboat in our town takes all the coal that Nauvoo consumes. That is from 150 to 250 carloads a year. Now, every time a load of coal goes across the river, evidently in this report they have taken the value of the team as well as the value of the wagon and the coal and put that in.

Col. NEWCOMER. What makes you think that?

Mr. KENNEDY. Judging from the fact that they carry a great many thousands of teams, which indicates that that must be the case. And whenever an automobile goes across, with two passengers, who want to get across the Nauvoo, they take the value of the car.

Col. NEWCOMER. It may be; I do not know about that, I am sure. But take the case of car ferries on the Lakes, where there are a good

many of the car ferries. I do not think they have taken the value of the cars, but have taken the value of the freight. It may be the same case there. Of course they are actually transporting that, but it is hardly fair to give that as the value of the commodity.

Mr. KENNEDY. That is just like taking the value of the locomotive of the train and figuring it in with the value of the commerce.

Col. NEWCOMER. In this case the ferry actually carries the car, but the train is not carrying the locomotive. If they had other cars shipped on those trains, that is true. But the boat actually carries the cars, and in that sense you can say, of course, there is a shadow of justification for it. But to my mind that is not fair. They should take only the value of the commodities being transported; not the vehicles in which they are contained.

Mr. KETTNER. Couldn't you have those two items segregated showing exactly what ferry traffic there is and make a supplemental report of the ferry traffic, and not have that go into the report at all?

Col. NEWCOMER. It should be done in that way.

Mr. KETTNER. Should we write that into the law?

Col. NEWCOMER. I do not think so. I think that is a matter that could simply be handled by departmental instructions.

The CHAIRMAN. May I make this suggestion for the consideration of the committee. As Col. Newcomer says there is no law complete in itself authorizing and compelling the preparation of statistics of water-borne commerce, domestic or coastwise. We do have a correct compilation of the records of our foreign commerce, both exports and imports, and, as the Colonel says, all that passes through the Isthmian Canal. The engineers, so far as I have observed the district engineers, endeavor to get the commerce in all our harbors and in all our interior waterways, but they operate under difficulties. I think in almost every district (certainly every one I know of) there is a man, I think an assistant engineer, who is detailed for that special work; and I am satisfied the reports we get of the commerce are not exaggerated, but that they are based upon actual facts. And if there are any errors, they are errors of omission in not giving the entire commerce, rather than exaggeration of the commerce there. But it does appear there ought to be some law on the subject authorizing the compilation of statistics of the commerce on our waterways, particularly those which are under improvement. I have no doubt the engineers would be very glad to be relieved of that duty, and possibly we might pass a law imposing that duty on the Department of Commerce. They have the machinery by which they could gather those statistics, and they would also be accessible to the engineers whenever they desired the information as to the commerce, upon which to base a report.

Mr. DEMPSEY. Isn't such a thing rather an unreasonable burden upon commerce? Take, for instance, the captains of the little boats running on a stream, and why should they have to make reports?

The CHAIRMAN. The assistant engineer in these districts, who is detailed to this work, so far as my observation goes, applies to the traffic manager of every steamboat line and applies to the wholesalers and jobbers, and applies to every source, and he insists that they shall make a report to him in detail, both as to the items of tonnage and value. And from that he converts it into tons and the valuation of the article and submits the statistics in his report.

As I said before, I think every report we get from the engineers as to the commerce upon any waterway, represents actual commerce; there is never any exaggeration. But they do frequently, as I have known, omit commerce simply because the parties have not kept a record or are negligent in complying with the request to furnish it. I have observed several large towns, for instance, on large waterways; when they would appoint a man and compel him to gather this commerce, it would always show up better than the previous reports of the engineers, and yet was accurate, because it was based on daily reports. I think it is a matter that may well receive the consideration of the committee, to see if we can devise some plan. There would be no objection on the part of the engineers to have this done by some other department, would there?

Col. NEWCOMER. No, sir; not at all. As I say, it is a very perplexing matter and we have been considering it but are simply unable so far to propose a satisfactory law.

Mr. BOOHER. Would not the benefits be better derived by creating a separate department? I am getting pretty near to the point where I am ready to draw a halt on the creation of bureaus. We start one of those bureaus and it grows for years and years, and I do not believe that the best benefits can be obtained in that way. My own notion is that if it is approximate—that is, if you get at this approximately, except in a few instances—that is sufficient. For instance, here is a little boat; you are not going to get the captains to put clerks on boats, putting in hours and days and days figuring the exact number of pounds being hauled on those boats. You do get it approximately, though. But I do believe that we should do it by the creation of a separate department, or bureau, you might say, although the thing, just like every other bureau, will need, after a while, an appropriation of \$2,000,000 or \$3,000,000 annually and require 200 or 300 clerks.

Mr. KETTNER. Mr. Dempsey, if that captain knew that the appropriations they were asking for depended upon the accuracy of his report, don't you think we would get it?

Mr. SWITZER. Do you suppose a captain on the Ohio River is going to fool around there or care about what appropriation they will get? He does not care about appropriations.

Mr. OSBORNE. Mr. Chairman, I have been listening to this discussion. It appears to me, for the purposes of this committee, that the simple suggestion of segregating the ferriage commerce from the other commerce is all that we need.

Mr. SWITZER. That is done on the Ohio River.

Mr. OSBORNE. The ferriage commerce is put in for some streams but not for others. For instance, take the Straits of Carquinez, before you get into San Francisco; there is a ferryboat that crosses there with every train that goes to San Francisco, and all of the passenger trains are carried over on that ferry. If that were included in the commerce of Port Costa and Benecia there would be an enormous commerce; it would be millions and millions of dollars, and, of course, it is manifestly improper that it should be so considered. These places along the western rivers, where they have ferries, simply put in so much ferriage and the balance is actual commerce up and down the river, which will answer our purpose. I am

like Mr. Booher; I think the creation of a new agency for handling that business would be a waste of money.

Mr. KETTNER. Mr. Chairman, I would like to inform my colleague, Mr. Osborne, that the commerce from Oakland to San Francisco is given in the report.

Mr. OSBORNE. Is it from the Straits of Carquinez?

Mr. KETTNER. No.

Col. NEWCOMER. That is not carried in the same sense it is above. They do not carry trains across, you know.

Mr. KETTNER. No.

Col. NEWCOMER. They simply carry goods and passengers. That is about a 5 or 6 mile trip.

Mr. OSBORNE. That ought to be put under the head of ferriage; that is not commerce.

Mr. KETTNER. Sometimes they do.

Mr. OSBORNE. In fact, it seems to me that a ferry is the same as a bridge—a means of getting across a stream.

Mr. DUPRÉ. Except, of course, when they run down the stream for 20 or 30 miles.

Mr. OSBORNE. Oh, yes; that is, of course, a different proposition.

Mr. FREAR. Might I offer a suggestion along that line in order that the colonel might enlighten us a little later on. In 1913 on the upper Mississippi River the engineers added to the estimates submitted automobiles ferried across the river, which were something like \$9,000,000 in value; and that item was criticized very strongly on the floor of the House, statistics covering automobiles across the river for a short distance. Col. Townsend also criticized that very severely, as Col. Newcomer will remember, in his statement before the Rivers and Harbors Congress. This item was omitted in 1914 and 1915, but on page 2718 of the present (1917) report appears "Automobiles, \$41,000,000"; and the engineers have reinserted this item, which makes up 45 per cent of the total commerce on the river, carried 1 miles across the river. The importance of all that lies in the fact that the engineer's report speaks of the additional business—of the increase in business, I believe—and the increase in business lies practically in this \$41,000,000 in automobiles, as I take it.

The CHAIRMAN. What page did you refer to?

Mr. FREAR. Page 2718.

Mr. DUPRÉ. But they have segregated it.

Mr. FREAR. They have segregated it at this time, but added it apparently to enlarge the value of the tonnage.

Mr. DUPRÉ. No; in order to give the information.

Mr. FREAR. But it was not given last year or the year before. It was in the third year before and was stricken out because of the criticism that was made.

Mr. DUPRÉ. The third year it was by bulk, as I understand.

Mr. FREAR. No; it was then itemized.

Mr. OSBORNE. Of course, that is evidently unfair.

Mr. FREAR. Here is another suggestion, Colonel, if you could give us some information when we reach this river. I have picked it out because it has a bearing upon this matter. Two hundred and seventy-two thousand tons of miscellaneous traffic is bulked at \$40,000,836. The reason I speak of that is because all that miscellaneous com-

merce has jumped very materially. It is only carried, on an average, 0.40 mile, and we ought to know what kind of commerce that is.

Mr. DUPRÉ. What page is that?

Mr. FREAR. It is for the upper Mississippi. It is one I happen to be familiar with, because I have lived there. Teams comprise \$8,000,000 of this total, carried 1 mile.

Col. NEWCOMER. I think undoubtedly those ferriage items ought to be omitted or reported separately.

Mr. FREAR. If they are omitted, it takes over one-half, or nearly two-thirds, of the value of all the river commerce. I speak of that because I know you may not be aware of that now, and I thought you might get some information for us.

Col. NEWCOMER. That is not ferriage, because it is a greater distance for which that is carried. The distance for which that is carried is 40 miles.

Mr. FREAR. I was wondering what it is. It is not merchandise. We have a separate item under merchandise up above which reaches \$3,000,000.

Mr. DEMPSEY. Haven't you some other information in your office about that?

Col. NEWCOMER. We haven't any further detailed reports in our office than are given in the district engineers' reports. These, of course, are summaries in the first volume in less detail; but these tables in the second volume give all the information we have; and in order to get further information on that we would have to correspond with the district engineer. You must know, of course, that these figures presented are the result of a great deal of labor in collecting those statistics and collating them from a great many individuals, and they doubtless have there the information upon which that is based. I will make an inquiry there about that item and let the committee know the result.

The CHAIRMAN. The next is the Wilmington, N. C., district, and the first estimate there is for Pamlico and Tar Rivers, N. C., \$9,000 for maintenance.

Col. NEWCOMER. The items for maintenance for that group, and, in fact, all through that district, as shown here, provide for those cases where there has been a shoaling. They are all substantially completed projects, and the annual shoaling has proceeded to such an extent that these sums are considered essential to restore the project dimensions—\$9,000 for the Pamlico and Tar, the same amount for the Neuse River, and \$1,200 for Contentnea Creek. The details, of course, for those are given, so far as the details are available in the report at the pages given for those different works.

The CHAIRMAN. They are all small items.

Col. NEWCOMER. They are all small items.

The CHAIRMAN. And all of them are necessary for maintenance, as I understand?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is Beaufort Harbor, N. C., \$4,000 for maintenance.

Col. NEWCOMER. That is a similar situation—a case where the shoaling proceeds progressively from year to year and requires annual care.

The CHAIRMAN. And in the same group is the waterway connecting Core Sound and Beaufort Harbor, N. C., \$2,000 for maintenance; waterway between Beaufort Harbor and New River, N. C.—that is, the portion between Beaufort and Swansboro—\$4,500 for maintenance; Morehead City Harbor, N. C., \$2,500 for maintenance.

Col. NEWCOMER. Those are all items of the same type.

The CHAIRMAN. I observe there is nothing for Beaufort Inlet, N. C.

Col. NEWCOMER. Beaufort Inlet is one where shoaling takes place also, from year to year, and requires constant work if you wish to keep the project depth; but that full depth apparently is only required in connection with deep-draft tugs that have been taking out stone for the construction of the breakwater at Cape Lookout. Work on that breakwater has been suspended now, due to war conditions. We have asked for no additional money, as the funds already provided had not been fully expended, and it was not considered necessary to keep the full project depth over the bar. We have funds that will be sufficient to keep the dredges working that we have there, which will take care of the immediate needs.

The CHAIRMAN. For the commercial steamers, tugs, and barges?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is for Cape Fear River, at and below Wilmington, \$30,000. That is a very important river, Colonel. Will that amount be sufficient?

Col. NEWCOMER. I think that amount will be sufficient for maintenance. They require, of course, constant work on that 26-foot project from Wilmington to the sea, both on the river and bar, and this amount, I think, will be sufficient, with the amount in hand, to maintain the present dimensions. The project has not been completed yet, but we have not asked for any money for its completion because we think the dimensions already provided will probably suffice under present conditions. The commerce, as a matter of fact, has diminished since the outbreak of the war. The principal item there was fertilizer—

The CHAIRMAN. Fertilizer and cotton.

Col. NEWCOMER. Yes; fertilizer and cotton were the two principal items and, of course, the movement of fertilizer has diminished very materially. Now, however, it is proposed to divert considerable traffic from the North Atlantic to the South Atlantic and Gulf ports, and these ought to be maintained for that reason. This amount will be sufficient, I think, for Wilmington.

The CHAIRMAN. Inquiry has been made as to why there is no estimate for appropriation for further improvement there. Is it regarded that the present ruling depth will accommodate the larger class of vessels on the lower Cape Fear?

Col. NEWCOMER. Yes, sir; the 26-foot depth, with the tide, will probably suffice for the movement of boats using that harbor. There has been a recommendation just made to Congress for an increased depth across the bar, so that the vessels need not be delayed in entering, on account of storm conditions there.

The CHAIRMAN. That, however, is a new project.

Col. NEWCOMER. That is a new project and is not included in the estimates.

The CHAIRMAN. Cape Fear River above Wilmington; there is an estimate of \$12,000 for maintenance and \$40,000 for further improvement.

Col. NEWCOMER. That is a lock and dam project. The \$40,000 are estimated—you will find the estimates given in some detail on page 603 of the annual report—for further improvement in the way of dredging the channel above the locks. The locks have been built on the Cape Fear River, and the project provides for a depth of 8 feet. As a matter of fact, we do not consider the full project depth necessary. The craft at present using that stream draw from 4 to 5 feet, so that we expect to give, with this \$40,000, a practical channel for the present craft. You see, the estimated amount to complete is about \$91,000, and we only ask for \$40,000 at this time. The \$12,000 is for the operation of the snagging boat to keep the stream clear from snags and other obstructions.

The CHAIRMAN. The committee will be interested in a bit of information regarding Fayetteville, which is at the head of navigation on the Upper Cape Fear. A gentleman was here a few days ago on the subject of the letter from the committee to the Secretary of War, and the reply of the Secretary of War, which was communicated to them through the district engineer, and he said that they were taking steps and had gotten through an issue of bonds for \$60,000, as I remember, for the purpose of constructing a terminal there.

Mr. KENNEDY. Then it is doing some good?

The CHAIRMAN. Yes; and there are quite a number of other letters which I will get together and bring to the attention of the committee sometime, showing the results of the committee's action.

We now come to the Charleston, S. C., district. The first item there for which an estimate is made is for Winyah Bay, of \$50,000 for maintenance and \$50,000 for further improvement.

Mr. FREAR. May I make an inquiry in regard to Wilmington? The Wilmington project does not appear in the index, does it, in any way, except for the whole district?

Col. NEWCOMER. It is under the head of Cape Fear River.

The CHAIRMAN. And Cape Fear is divided into "at and below Wilmington" and "above Wilmington."

Col. NEWCOMER. If you will notice, Mr. Frear, in the very first column in this committee's book they give the page.

The CHAIRMAN. Colonel, we will be glad to hear from you about Winyah Bay.

Col. NEWCOMER. There is an 18-foot project for Winyah Bay to Georgetown, which has been completed so far as dredging the channel is concerned and the jetties for the protection of the channel at the bar; but there are still some training walls to be built in order to protect the channel from shoaling and reduce the maintenance cost. The \$50,000 for maintenance is necessary for the operation of the dredge to keep the channel clear and restore the project dimensions. The other \$50,000 is for continuing work on that training wall for which some funds were provided last year. You see, that is the estimated amount required to complete.

Mr. KENNEDY. Does that project accommodate any other commerce? The commerce is very small there for the amount of money spent, and I was just wondering—

Col. NEWCOMER. This is the port, as you know, for Columbia, S. C., and other cities in that region. It was expected that they would develop a considerable commerce, but they have not done so on a very large scale yet.

Mr. KENNEDY. I know when I first came on the committee there was a good deal of opposition to that project. There was a Member of Congress from South Carolina on the committee at that time, and I know Mr. Sparkman was not very friendly to the amounts that we were appropriating for that commerce. But I was just wondering whether it accommodated any commerce outside of what is shown here?

Col. NEWCOMER. They do not have a very extensive commerce yet, and it is not very likely to become so. Of course, the project depth is not deep enough for many of the coastwise vessels—only 18 feet.

Mr. KENNEDY. But we have spent large sums there.

Col. NEWCOMER. It is very true there have been heavy expenditures with only a very moderate development of commerce. But with this expenditure now we hope we will reduce the annual maintenance cost by building the training walls.

Mr. KENNEDY. Nothing is given as to the depth; what is the depth provided in the project?

Col. NEWCOMER. Eighteen feet.

Mr. KENNEDY. Has that been completed?

Col. NEWCOMER. Yes, sir; the project depth has been completed.

Mr. KENNEDY. It is not mentioned here.

Col. NEWCOMER. It is given on page 617 of the annual report. This \$50,000 now asked for is the final item in the estimate for completion. There is an item now for an examination of this harbor with a view of providing increased depth. That, of course, is a matter that will be reported on later.

Mr. KENNEDY. What is the increased depth asked for?

Col. NEWCOMER. That has not been definitely decided.

Mr. KENNEDY. They have now 18 feet.

Col. NEWCOMER. They have now 18 feet. The report has been sent back—it was submitted once, in fact, with an adverse report, and the local Congressman felt that the matter had not been properly submitted and asked that it be referred again, particularly as to what depth would best be adapted to the needs of the locality.

Mr. FREAR. In those cases, Colonel, do they furnish any evidence to your board in order to show the necessity of going on and making these surveys, or is it just at the request of the local Congressman?

Col. NEWCOMER. Whenever an item is inserted authorizing an investigation of any locality, we always take it up, of course, with the local parties to find out what they want, if there is no specific statement other than a statement of the locality to be considered, and we give them every opportunity, of course, to present the matter in any way they might see fit, so that the subject may be thoroughly ventilated and prevent any claim being made that they were not given a hearing in the matter. And invariably, of course, whenever a Congressman, or any other person for that matter, asks for an opportunity to present the facts, he is given that opportunity.

The CHAIRMAN. The commerce there does not show as favorably as one would expect. In order to give them the benefit of any other facts, I will call the attention of the committee to the note on page

620, which says that "the above figures do not include 45,741 tons of freight, valued at \$2,421,204, passing over Georgetown Bar, representing traffic between ports to the north and south of Georgetown, and entering Winyah Bay, incidental to its being a port of call, nor do they include 77,219 tons, valued at \$2,089,788, of internal freight traffic between Georgetown and rivers tributary to Winyah Bay."

Mr. FREAR. I am asking whether it accommodated any other traffic outside of that?

The CHAIRMAN. Yes; it does. And still it is unquestionably true that Georgetown itself ought to show a larger commerce than 237,000 tons, although there has been a large falling off in the tonnage there. Lumber represented the principal item there, and there has been a large falling off in the movement of lumber, which, I guess, represents that decrease.

Mr. DEMPSEY. How large a place is Georgetown?

The CHAIRMAN. About ten or twelve thousand population.

Col. NEWCOMER. I might state in connection with this discussion of commercial statistics that in several places where local commerce is not of much importance they have tried to include in their statistics of commerce the entire cargo of the boat which came in to call at their port. They state very truly that that boat passed through the channel, and therefore the channel is entitled to a statement of its commerce. As a matter of fact that commerce was included here and was separated in our office with this note. We did not think that cargo was part of the commerce of that port, when it was merely carried by boats calling there on their way to other points.

Mr. BOOHER. Why would not that be fair to do it?

Col. NEWCOMER. We want to give the figures showing the commercial importance of the harbor at that locality.

Mr. BOOHER. It would not have gone to that harbor unless this river was improved.

Col. NEWCOMER. That is very true; but the purpose for the improvement of that harbor is to take care of the local commerce.

Mr. BOOHER. That is the way it appeals to you—that it is to take care of the commerce which originates or is destined there?

Col. NEWCOMER. Yes.

Mr. FREAR. Along that line of commerce statistics, just one question as to the report on the Tennessee River. The engineers now report boats carrying freight cars that were never opened, but they were carried as commerce, and they reported that.

Col. NEWCOMER. I think that is quite proper; that is, if they give the cargo that is on those freight cars.

Mr. FREAR. They do not give the articles, but give the total tonnage reported to them. On what theory is that added for the ferrage of those freight cars across the river?

Col. NEWCOMER. On the Tennessee River, that is a place where it moves, I think, from Hobbs Island to Gunter'sville. The distance is about 22 miles on the river between their terminals, so that they make a substantial use of the river there. In other words, this is not like the ordinary ferry.

The CHAIRMAN. The next item is the inland waterways between Charleston Harbor and Alligator Creek, opposite McClellanville, \$5,000 for maintenance. Have you any comments, there, Colonel?

Col. NEWCOMER. That is a minor project, but it is one of a great deal of local importance, because that is the only means of outlet the people have there, through this waterway. As a matter of fact, this \$5,000 will not provide the full project depth; it was all, it seemed to me, we were justified in asking, in view of this small tonnage there, and it seems to me they ought to get along with that amount.

Mr. KENNEDY. What is the depth?

Col. NEWCOMER. Four feet. The district officer, in this case, asked for a substantially greater amount, but in view of this small tonnage we felt this was all that should be given.

The CHAIRMAN. The commerce is small and it is local, but it seems to be of a great deal of importance to the locality. As I recall, they have no other means of transportation?

Col. NEWCOMER. That is right. It is a very isolated place, and you can only get to it by boat.

The CHAIRMAN. Charleston Harbor, S. C.: The estimate is \$40,000 for maintenance and \$70,000 for further improvement.

Col. NEWCOMER. Congress, at its last session, adopted the 30-foot project for Charleston Harbor and appropriated \$70,000. I think it was, and this is to complete the new project to the 30-foot depth. The item of \$40,000 is required for the annual shoaling.

The CHAIRMAN. We next come to the Savannah district, Georgia. The first item there is Savannah Harbor, for which there is an estimate of \$100,000 for maintenance.

Col. NEWCOMER. We have not asked for any additional money for further improvement at this time, because we believed that the amount provided at the last session of Congress would probably suffice until the next bill is taken up. That is a case where there is very extensive shoaling from year to year, and we feel an additional amount of \$100,000 is needed for maintenance work.

The CHAIRMAN. We adopted a project there, in the last bill, and the amount available on June 30 last was \$1,148,522. Is it considered that is all you can proceed to expend during the next fiscal year on the new project?

Col. NEWCOMER. Yes, sir; I think so.

Mr. BOOHER. Is that amount on hand now?

Col. NEWCOMER. Oh, no, sir; not on hand now. That was on hand substantially as of the 1st of July, although it takes in, of course, the appropriation made August 8—that is, it was the amount available generally for the fiscal year. We have bought a dredge there from the Panama Canal, which we got at a very reasonable figure, that is going to enable us probably to carry out that project at a lower figure than we had estimated.

The CHAIRMAN. The next item is Sapelo Harbor, Ga., for which an estimate of \$2,000 is made for maintenance.

Col. NEWCOMER. That is a case where there is an annual shoaling. It is a lumber-shipping point, and experience indicates that the shoals re-form from year to year. We have about \$2,000 on hand and will need \$2,000 for the next year. The same way with Satilla River—the two, the Sapelo and Satilla, are similar cases, where the annual shoaling requires about that amount to keep the channel open.

The CHAIRMAN. The next is a system of rivers, the Altamaha, Oconee, and Ocmulgee Rivers, Ga., where there are items of \$5,000, \$10,000, and \$25,000 for further improvement.

Col. NEWCOMER. While put down for further improvement, that is mostly for maintenance and only to a small extent for improvement. You will recall in that case that the project is rather of an indefinite nature. They have substantially 3 feet and want to get 4 feet, but the expense involved in that was considered so great that instead of adopting a project with a 4-foot depth we adopted a project for an annual expenditure of \$40,000 to maintain the existing channels and to improve them as much as other current needs will permit from year to year. And they are making a gradual progress toward a somewhat greater depth.

Mr. FREAR. There has been a great deal of criticism about those three projects. Can you say what is the general condition there and the possibility of their being used to a greater extent?

Col. NEWCOMER. I do not know that anything new or additional can be said on the subject. There always has been, as you say, criticism on account of the commerce. There is now a substantial commerce of timber, and there is a boat line using those streams which has been continuously in operation; but its tonnage is not large. I understand they are planning additional barges.

Mr. FREAR. That is, you mean on the three rivers one boat?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. We are spending a million dollars on it, apparently, so far.

The CHAIRMAN. There is apparently a stronger disposition there than has heretofore existed to develop commerce on those rivers; and I do not think, even under war conditions, the commerce has fallen off to any extent. The report of the engineers, upon which this project was based, limits the annual expenditures to \$40,000, as I recall, and the people of that section have been anxious to have that limitation removed. I have stated to them that the committee would be glad to know that they are utilizing the river more fully before they give favorable consideration to a larger annual appropriation.

Mr. FREAR. May I ask a question before we pass from that? I notice on page 687—I want to speak of this because this has a bearing on many other comments made all the way through—it says: “Marked difference in value of commerce for 1914 and 1915 is on account of classified freight having been reported as general merchandise in 1914 and an overestimate of the value of the same.” In other words, the tonnage on that river has decreased since last year about 50 per cent, or very nearly so; but the value is put at an increased amount. Now, on what basis do they say that the value is overestimated? Who overestimates? Who reports this to the engineers, and how do you correct that? That is on page 687, and there are these comments so frequently I was wondering what is the basis for making that correction.

Col. NEWCOMER. That is simply an estimate made by the district office as to the value, based upon information given him by shippers.

Mr. FREAR. Yes.

Col. NEWCOMER. We have substantial agreement, I suppose, in certain sections as to the value you will place upon certain items of

commerce, depending upon their character. For instance, we know that at Providence, R. I., the products of cotton and things of that kind, will warrant a certain basis. In other places it is different. This note apparently means that some of the commerce was classified under the wrong item and in that way gave a wrong value for the whole commerce, because a certain value per ton is assigned to each item.

Mr. FREAR. Understand I do not mean that the report is not correct, but you will notice on page 687 that, while the commerce has decreased one-half, or substantially that, the engineers report an increased valuation.

Col. NEWCOMER. I noticed that, although in 1914 there is some difference.

Mr. FREAR. I understand. I do not think there is any question about their not being accurate.

Col. NEWCOMER. That was a very high value in 1914.

Mr. FREAR. On what basis was it figured in 1915 and 1916, when the commerce was reduced nearly one-half?

Col. NEWCOMER. I judge that all values, of course, have increased.

Mr. FREAR. That is an increase of 100 per cent.

Col. NEWCOMER. Substantially, if the commerce was of the same kind. These figures for the value of that commerce are given in detail on page 2275 in the second volume, where the engineer's report is found.

Mr. FREAR. The principal items there are fertilizer and oak blocks.

Mr. DEMPSEY. Fertilizer has gone up about two or three times what it used to be, has it not?

Mr. FREAR. Yes.

Col. NEWCOMER. I do not know why oak blocks should be so high—that is something less than \$20 a ton.

Mr. DEMPSEY. I paid \$5 for a quarter of a load of pine.

Col. NEWCOMER. Yes. Twenty dollars a ton, of course, seems rather high for oak blocks. Still it may be a fair value; I do not know.

The CHAIRMAN. I doubt if that is excessive.

Brunswick Harbor, Ga.: For maintenance, \$20,000.

Col. NEWCOMER. That amount is needed, in addition to the available funds, in accordance with recent experience, to maintain the present project dimensions there.

Mr. KENNEDY. What depth do they have there now; what is the project depth?

Col. NEWCOMER. That is a 23-foot project at low water and 30 feet at high water.

Mr. KENNEDY. There is a new project?

Col. NEWCOMER. They have asked for an additional depth, and an additional depth has been recommended but not yet adopted. It was in the bill that passed the House before and failed in the Senate.

The CHAIRMAN. There was a very considerable agitation when the last bill was under consideration for the adoption of a new project there.

We now come to the Jacksonville, Fla., district, and the only estimate in that district is for Miami Harbor, Biscayne Bay, Fla., \$20,000 for maintenance.

Col. NEWCOMER. It is the only one on that page, but there is another page for this district. The Miami project is a new one and just being completed. It is based upon considerable local cooperation, which they are furnishing, and this \$20,000 is deemed essential in order to maintain the project depth. We do not know yet just how that project is going to turn out, because, as I say, it is just being completed with an 18-foot channel from Miami to the sea.

The CHAIRMAN. In the case of the Miami Harbor improvement there has been, as Col. Newcomer said, generous cooperation there. Do you think the \$20,000 is sufficient for the maintenance of that 18-foot channel?

Col. NEWCOMER. Yes, sir; that is the amount that is considered necessary. In that case it is the amount the district engineer put in, and it was not reduced.

Mr. FREAR. What is the meaning of that memorandum on the side here? It says "Practically none of this commerce was benefited by the channel under improvement but were it not for the dredging operations this channel would be more serviceable than the main entrance at Cape Florida."

Col. NEWCOMER. That, obviously, is a note taken from the annual report.

Mr. DUPRÉ. Isn't it a clerical error, or a typographical error? It seems to be contradictory.

Mr. FREAR. Does it mean this dredging interferes with the traffic?

Mr. DEMPSEY. No; it means the channel at Cape Florida is more important and it is the dredging that makes it so. It does not say what is the good of this one.

Mr. FREAR. This channel, as I recollect, runs along the bank quite a way, whereas the other channel just crosses the bay into the jetties over toward the city. This channel runs along the bank for a distance of 2 or 3 miles.

Col. NEWCOMER. That note, of course, was made by Mr. McGann, and just where he got that last part of it I do not know. The annual report states that practically none of this commerce was benefited by the improvement of the channel. Of course, that channel is not completed yet and has not been available. The significance of the other item I do not know.

The CHAIRMAN. Look at page 724, the last sentence in that paragraph.

Mr. FREAR. The present channel will be, of course, the desirable channel when it is completed. The one you are working on now runs 2 or 3 miles along the bank. The other was built for private parties as a sort of cut-off across the bay.

Col. NEWCOMER. That simply means the dredging operations of that channel now prevent its use; so, of course, the commerce that would use it has to go through the other channels.

Mr. DUPRÉ. I think we understand it—that were it not for this dredging going on there now this channel would be better than the present one.

Col. NEWCOMER. That is the idea.

Mr. DUPRÉ. There is nothing inconsistent about that.

The CHAIRMAN. Colonel, that situation is not entirely clear to me, unless it is due to the fact that for the calendar year 1916 that this project was under construction and therefore could not be used.

Col. NEWCOMER. That is the idea.

The CHAIRMAN. That is the explanation?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Mr. Frear, it seems that the explanation is that during the calendar year 1916, which is represented in this estimate of commerce, the project was under construction and therefore could not be used.

Col. NEWCOMER. That is, the new channel could not be used.

The CHAIRMAN. Yes.

Col. NEWCOMER. I think it could be used to some extent, but the dredging operations interfered with its use.

The CHAIRMAN. This is 1917, while this commerce here represents the calendar year 1916.

Col. NEWCOMER. Yes.

(Thereupon, at 12.10 o'clock p. m., the committee adjourned until to-morrow, Tuesday, January 8, 1918, at 10 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 8, 1918.

The committee at 10.30 o'clock a. m. proceeded with the hearing on the estimates, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. We had not completed the Jacksonville (Fla.) district yesterday, and we will now continue. Page 22 of the committee book: The first item for which an estimate of appropriation is made is Caloosahatchee River, Fla., \$4,000 for maintenance. Colonel, are there any comments on that?

STATEMENT OF COL. HENRY C. NEWCOMER—Resumed.

Col. NEWCOMER. That is the amount expended from year to year for annual maintenance. We have about that amount on hand now, \$5,800, and need the additional amount for the maintenance of that channel. It is the only item in that group that requires it.

Mr. KENNEDY. I notice there is nothing asked for the St. Johns River; is it because you have sufficient money on hand?

Col. NEWCOMER. Yes, sir.

Mr. KENNEDY. I thought we had not gotten away from that.

Col. NEWCOMER. The project is nearly complete, for one thing—

Mr. KENNEDY. Of course, the maintenance charge is pretty heavy.

Col. NEWCOMER. The maintenance charge is pretty heavy. We got an appropriation last year for the maintenance of the jetties.

Mr. KENNEDY. For \$300,000.

Col. NEWCOMER. Yes. We have enough money there for the present.

The CHAIRMAN. The next item is Hillsboro Bay, Fla., for which there is an estimate of \$20,000 for maintenance and \$300,000 for further improvement. It is the only estimate in that group.

Col. NEWCOMER. We have here a new project for a depth of 27 feet authorized in the last bill, which carried an appropriation of \$300,000.

Mr. KENNEDY. You consider it important that we complete that, don't you, as quickly as possible?

Col. NEWCOMER. I would not say complete it as quickly as possible, but complete it in the course of three or four or five years.

Mr. KENNEDY. I noticed in the hearings before the Senate Committee on Commerce, on the Mobile project, they claimed Tampa did not need any more water; that they never loaded a full cargo of phosphate rock; that it was not economical or desirable to do it; and the boats came to some other Gulf port and finished the cargo. And they complained there was no necessity of comparing their needs to Mobile, for instance; that Tampa did not need the additional 3 feet.

I had a talk with a sailor here in Washington since then, and I just happened to ask him how it happened that he was in the Naval Service. Well, he said he had been on the water a great deal and had been on the vessels that called at Tampa for this phosphate rock. I remembered what the party said at the Mobile hearing and asked him about the proposition, and he said that it was true.

Col. NEWCOMER. That is reported to us also; but the reason for it is they can not take it out because they do not have enough water.

Mr. KENNEDY. They don't load to the depth they now have, he said.

Col. NEWCOMER. I think that is a mistake.

Mr. KENNEDY. That is the contention in the Mobile hearing, that fully one-third the vessels that made the port, they said, went to New Orleans and Mobile and finished their cargoes.

Col. NEWCOMER. That is the same situation that is told to us, but that it is because they can not load a full cargo. In other words, those vessels have a loaded draft of 26, 27, 28, or 29 feet.

Mr. KENNEDY. The contention is they do not load to the depth they have there.

Col. NEWCOMER. The figures submitted to us indicate that they have utilized the depth they have.

Mr. KENNEDY. The reason I asked the question was I noticed in the report great stress is laid on the fact they needed additional water to move the phosphate rock.

Col. NEWCOMER. That is true.

Mr. KENNEDY. And I had seen that in the hearing, and it was afterwards verified by this fellow, with whom I talked, to some extent. He did not know the reason, but he said they did not load to the depth they had there, but went to Mobile.

Col. NEWCOMER. I think that is a mistake.

Mr. KENNEDY. It may be it is a mistake.

Col. NEWCOMER. It is true they do not load a full cargo, but it is simply because they can not carry out a full cargo with the present channel. I do not see any reason why they do not put on a full cargo, other than that.

Mr. KENNEDY. They say it is not economical to do it.

Col. NEWCOMER. You mean to say they can get a better paying cargo at these other ports?

Mr. KENNEDY. This boy did not know why, but he said they did not do it; he knew they did not take a full cargo of phosphate rock, but went to Mobile or New Orleans and finished their cargo.

Col. NEWCOMER. That has never been brought to my attention before.

Mr. DEMPSEY. As a usual rule, it is a cheap cargo.

Mr. KENNEDY. I do not know whether it does not carry well or it would not pay them to do so.

Col. NEWCOMER. The only reason I can see is that they get a better paying cargo at some other point, some other commodity which they can load easily at better rates, and therefore they would not want to take this lower-class commodity. This is the first time this has been brought to my attention, this particular point that you mention. They have been urging that the project be deepened to 30 feet because many of those boats draw 28 and 30 feet when loaded. In fact, the boats go out now with only a part cargo and then lighter some of this product to the deeper water.

Mr. KENNEDY. That statement in the Mobile hearings is what I base this on. And then I thought about what was disclosed in that hearing. He said he did not know the reason, but that they did not take on a cargo to the extent of the depth there.

The CHAIRMAN. That statement in the hearing before the Senate committee on Mobile was called to my attention, and I asked some one from Tampa about it. It may have been Mr. Sparkman; I do not recall definitely as to that. But the contention was that the statement in the Senate hearing was not correct as to Hillsboro.

Mr. KENNEDY. That may be the case.

The CHAIRMAN. You have to look somewhat askance at statements made by one port against a rival port.

Mr. FREAR. I suppose by the same rule we should look askance always at the statements of the local committees.

The CHAIRMAN. Yes; they will emphasize their merits, whatever they are—naturally.

The next item is one of \$8,000 for removing water hyacinths from the navigable waters of the State of Florida.

Col. NEWCOMER. That is a somewhat smaller amount than is usually appropriated for that purpose, but with the funds on hand we believe it is sufficient. It is work that is continuously in progress and, as you remember, has to be kept up from year to year.

Mr. KETTNER. Mr. Chairman, I have had the good fortune with members of the committee of seeing some of the hyacinths since our last meeting, and I do not believe there will be an objection.

Mr. FREAR. The only criticism I urge to that is, I notice in the column headed "Percentage of completion," you put a star.

Col. NEWCOMER. I do not know whether it will be indefinitely required, but at least up to date we have not found any method of permanently eradicating these water hyacinths. And I do not know whether we will ever get a method of permanently eradicating them.

Mr. DEMPSEY. We had more trouble with that item in the last bill, for the water hyacinths, on the floor than on everything else put together.

Mr. OSBORNE. I would very much dislike to see this item taken out, because it would deprive us of a source of humor, which seems to be inherent. It would be really cruel to take out an item from which some of the Members of the House derive so much pleasure, and which gives them an opportunity of exercising a somewhat sluggish wit.

Mr. FREAR. I have never made any particular criticism about this item—

The CHAIRMAN. I can say for Capt. Osborne, Mr. Frear, that he was not referring to any member of the committee.

Mr. FREAR. I can say this, that there are plenty of items in the rivers and harbors bill that will afford us an opportunity for criticism aside from that.

The CHAIRMAN. I do not believe you have reference to this bill.

Mr. FREAR. No; not to this bill. I had reference to previous bills of the Rivers and Harbors Committee.

Mr. DEMPSEY. May I ask a question right here?

It has no reference to this item. We have, Col. Newcomer, up in western New York, a matter about which I talked to you over the telephone, for the enlargement of the entrance to Buffalo Harbor. The Chamber of Commerce up there seems to think they never have been able to get a sympathetic hearing from the local officer. They seem to think he is out of touch with the local situation. Now, that is a large port. From the standpoint of tonnage, I guess it is as large as any port in the United States, isn't it?

Col. NEWCOMER. No; oh, no, sir; not that. But it is very important.

Mr. FREAR. It has less than 20,000,000, while at Superior-Duluth it is 50,000,000.

Mr. DEMPSEY. Well, one of the largest.

Mr. FREAR. Third or fourth, but very large.

Mr. DEMPSEY. I am content to put it there, then. Now, they are really very greatly dissatisfied up there. It is a general business dissatisfaction with the kind of report they get, or the failure to get reports from the local officer; and they think—I am not saying it is so at all—but there is a very general feeling that the local office is not in touch with the business situation, and does not attempt to get in touch with it from the business standpoint, but that they consider it solely from an engineering standpoint. And I was wondering if it would not be possible for us, at a hearing here, to have representatives of the Chamber of Commerce and have Col. Warren come down here for a hearing and examination, and find out what there is to it, and see if we could not reconcile their differences and make a more harmonious family there than they are now.

The CHAIRMAN. What is the particular phase of improvement there or proposed improvement about which there is complaint?

Mr. DEMPSEY. They say the entrance is so narrow it is absolutely dangerous. That seems to be the contention of the vessel men and those interested in shipping, and the business men generally. And they say they never have been able to make the slightest impression upon the local officer as to it at all.

Col. NEWCOMER. I might say that the local officer has been supported by the Board of Engineers for Rivers and Harbors and by the Chief of Engineers in that matter.

Mr. DEMPSEY. That is very natural.

Col. NEWCOMER. Oh, no.

Mr. DEMPSEY. That is very natural, for you take his report as *prima facie* evidence and might not go beyond it.

Col. NEWCOMER. No. He submits all the data furnished by local interests.

Mr. DEMPSEY. What we want to do is to have a general hearing and see if we can not convince the engineers that they are wrong.

Col. NEWCOMER. Of course, these adverse reports upon the widening of the entrance to Buffalo Harbor have been submitted to Congress, and a right of appeal exists. It is quite proper, I suppose, for the local committee to appeal to this committee from the adverse decision of the local officer and the Chief of Engineers.

I might explain briefly that the situation is this: For a great many years the entrance to Buffalo Harbor was obstructed by its use by the Delaware & Lackawanna Railroad Co. for berthing boats along its coal pier. It was the Government pier which they had gotten possession of in some way, and the entrance to the channel, which is about 200 feet wide, was obstructed by the coal boats which were being loaded there. They have a beam of about 60 feet, and, of course, in going by a boat of that kind you have to keep some distance from it to avoid the danger of collision. That situation has been remedied by forcing the Delaware & Lackawanna Railroad Co. to remove that old pier and build a slip or berthing space in which their boats now lie while being loaded with coal, so that they are entirely outside of that 200-foot channel. That relief to the situation is so marked, and the width provided there now is so much greater than that inside the harbor where all these boats passing this boat must go, where the boats lie up on both sides of the channel, at the docks, that the Engineer Department feels that some trial of that situation should be made before undertaking the large expense of widening the entrance, which would require removal of bulkheads or walls built on the other side.

Mr. BOOHER. Let me make a suggestion and see if it meets the chairman's approval: I do not expect we could get anything in this bill on this question, but when we finish the consideration of this bill why couldn't we have Col. Warren and the representatives of the shipping interests and Chamber of Commerce come down here and have a hearing and find out where we are for the purpose of next year? I think it is always good policy to give the local interests an opportunity to be heard, because it very frequently removes apparent cause for criticism.

Mr. DEMPSEY. They have very large commercial interests and they are both absolutely satisfied that they have been very badly treated, and they think they are unable to get any consideration, even the slightest consideration, from the local officer. They feel that he treats them with the most supreme indifference and prefers to slight them and treat them with contempt, if possible. That is a most general feeling among the business men of western New York as to the local officer.

Mr. KENNEDY. If the condition is as you claim, what you want in this bill is a survey, isn't it? You have to get started that way and could save a year.

Mr. DEMPSEY. We have tried that way several times, and we have been treated, and our port has been treated, as if it was a small, unimportant port.

Col. NEWCOMER. I would like to explain, in that connection, that the secretary of the Buffalo Chamber of Commerce recently visited the office of the Chief of Engineers, and I found that the report on survey of Buffalo Harbor that was authorized by Congress, I think it

was about two years ago, had been considered by the Board of Engineers for Rivers and Harbors and was just about to be transmitted by the Chief of Engineers to the Secretary of War for submission to Congress. He said they had not been given an opportunity to present their views against the district officer's adverse recommendation on certain matters which they had asked. One of those was the widening of the harbor entrance. The report of the district engineer was favorable upon several of the points that were brought up. Upon his request that report has been held up, and I am now awaiting further information from the Chamber of Commerce at Buffalo. They will be given a full opportunity to present their case to the Board of Engineers for Rivers and Harbors before the report is transmitted to Congress. I think possibly it might be well to await that discussion, which is the normal procedure, before taking it up here.

Mr. DEMPSEY. Let me understand that. The Chamber of Commerce is to be given an opportunity to present what they deem are their grievances to the Board of Engineers?

Col. NEWCOMER. To the Board of Engineers for Rivers and Harbors, which is the board of review passing on all of these projects.

Mr. DEMPSEY. May I be advised as to when and where that hearing is to be?

Col. NEWCOMER. Certainly. We will be very glad to inform you. As a matter of fact, of course, the representations made by the Chamber of Commerce to the district officer are in the file of papers that came to the board, so that they were thoroughly familiar with what was asked for and the reasons advanced for it, and that was all under consideration before the board took action on the matter. But at the same time, the board is quite willing to give further opportunity for a hearing, if they desire to be heard.

The CHAIRMAN. I think, Mr. Dempsey, it might be well for you to communicate that to the Chamber of Commerce and ask that they be prepared to present their views fully to the Board of Engineers, in view of the statement just made by the colonel, because you want to exhaust your remedy before presenting the matter to the committee.

Mr. OSBORNE. Mr. Chairman, will that hearing before the Board of Engineers be had before we get done with our work here?

The CHAIRMAN. It is not in condition for this committee to consider it, at any rate, and probably will not be at this session. What Mr. Dempsey wishes is a full opportunity for the people of the city of Buffalo to present their views, and it seems that opportunity is now open, based on an authorization for an examination and survey on which no final report has as yet been made.

We now come to the Montgomery, Ala., district, and the first item there for which an estimate is made is Apalachicola Bay, Fla., \$9,000 for maintenance. That is the only estimate for an appropriation in that group. Are there any comments on that item?

Col. NEWCOMER. That is the amount required to keep the channel open. It is a place where the shoaling takes place very rapidly. It is at the mouth of the Apalachicola. That is the outlet for quite a river system, and while the commerce is not large the expenditure of this amount seems to be advisable.

The CHAIRMAN. The next item is Holmes River, Fla., \$2,000 for maintenance. In the same group is Blackwater River, Fla., \$5,000

for maintenance, and Pensacola Harbor, Fla., \$15,000 for maintenance.

Col. NEWCOMER. The \$2,000 for the Holmes River simply represents the usual annual cost or maintenance and is needed for that purpose. The item of \$5,000 for the Blackwater River, Fla., I would suggest be stricken out; because, since that estimate was submitted, there was a storm which shoaled the channel so badly and the need was so urgent that an allotment was made of that amount from the fund available for emergency work. So that that item, I think, can be omitted. This is work that is ordinarily required every two or three years, and the amount already allotted will take care of it until the next bill is under consideration.

The \$15,000 for Pensacola Harbor is needed for maintenance. That is a project which costs very little, relatively, as compared with the importance of the commerce.

The CHAIRMAN. Do you recall the minimum depth of the entrance to that harbor now, Colonel?

Col. NEWCOMER. It is a 30-foot project, and I think they have that depth.

The CHAIRMAN. That is maintained?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Mobile (Ala.) district: The first item there is for Mobile Harbor, Ala., maintenance, \$160,000; further improvement, \$100,000. We will be glad to hear from you on that as to the sufficiency of those amounts there.

Col. NEWCOMER. The item of \$160,000 is considered necessary in order to maintain the present project depth of 27 feet. We have there two and sometimes three dredges which can be used on that work, and we think it is advisable to keep those dredges employed throughout the year; and for that reason the additional \$100,000 is requested for work looking toward the increased depth of 30 feet that was authorized by the last Congress which will keep the existing plant employed. The new project provides for the purchase of additional dredges, but that is not proposed at this time.

The CHAIRMAN. For reasons that the committee understands—the greatly increased cost of construction.

Mr. GRAY. When will all the funds now available be exhausted, Colonel?

Col. NEWCOMER. Probably about the end of this fiscal year.

Mr. GRAY. In other words, there will be nothing on hand after June 30 of this year.

Col. NEWCOMER. Substantially that; yes, sir.

Mr. GRAY. Did not the storm down there do a great deal of damage, according to the reports which you had?

Col. NEWCOMER. We have not had any reports indicating any great damage to the channel.

Mr. GRAY. That is causing considerable shoaling, or there has been an immense amount of it; an unusual amount of it in the channel?

Col. NEWCOMER. We have had no reports about that.

Mr. GRAY. That is the information I have.

Col. NEWCOMER. That has not come to us.

Mr. GRAY. Do you remember the original estimate and the initial appropriation proposed by the Board of Engineers? It was about \$850,000, wasn't it?

Col. NEWCOMER. I think it was something in that neighborhood. As I say, that proposed an additional dredging plant, but this is not a favorable time for undertaking that. Of course, last year, when the project was adopted, no money was appropriated for beginning the work. It was only authorized that the money provided for maintenance could be expended also for additional improvement in case the money would extend to that work.

Mr. GRAY. As a matter of fact, none of it was expended on the new project?

Col. NEWCOMER. I think not.

Mr. GRAY. That is my information, that there was no money at all spent on the 30-foot project, as adopted at that time.

Col. NEWCOMER. This amount, with the money now available, would allow some expenditure of money on the new project.

Mr. GRAY. Have you kept up with the recent developments in that locality?

Col. NEWCOMER. You mean with the shipbuilding, etc?

Mr. GRAY. Yes.

Col. NEWCOMER. I am aware of that; yes.

Mr. GRAY. You know about that?

Col. NEWCOMER. Yes.

The CHAIRMAN. It seems to me that the gist of the statement of Col. Newcomer lies in this, that the amount recommended here would be sufficient to keep the plant there in operation during the fiscal year ending June 30, 1919.

Mr. GRAY. We want some of that 30-foot channel begun to be dug.

The CHAIRMAN. This \$100,000 will be applicable to that.

Mr. GRAY. It was before, but they did not start on it.

Col. NEWCOMER. You only had \$100,000 then, you know, altogether.

Mr. GRAY. Yes; but they did not start before.

Col. NEWCOMER. We are asking now for \$260,000.

The CHAIRMAN. The main reason for adopting the project in the last bill, as I recall, was that the maintenance work might be prosecuted with a view to the increased depth provided in the new project.

Mr. BOOHER. Colonel, I understand you to say that this \$160,000 for maintenance is necessary to expend in the coming year.

Col. NEWCOMER. Yes, sir; that is what we consider necessary for the maintenance of the 27-foot project; and the \$100,000 will allow for additional operation of the plant toward the 30-foot project.

Mr. GRAY. Is not that a meager amount for a project of that kind?

Col. NEWCOMER. It is sufficient to provide for the existing plant. Of course it is a meager amount, in a way, toward a million-dollar project; but that would involve larger expenditures for plant.

Mr. GRAY. I understand that is to go for one year, that \$100,000.

Col. NEWCOMER. Yes, sir.

Mr. GRAY. How many dredges will be at work?

Col. NEWCOMER. We will have two there, I think, and can have them constantly at work; and I think we have another that can be put there on the work.

Mr. GRAY. It is just a question in my mind whether this \$100,000 will be sufficient to run this year, and up to next year.

Col. NEWCOMER. Yes; that is the estimated operating expense, including the \$160,000 for maintenance.

The CHAIRMAN. The next item is Gulfport Harbor and Ship Island Pass, Miss., for which an estimate of \$80,000 is made for further improvement.

Col. NEWCOMER. While that item is placed under the head of "Further improvement," the note says it includes maintenance. As a matter of fact, it is nearly all maintenance. It requires in the neighborhood of from seventy to seventy-five thousand dollars to maintain the existing project depth.

Mr. FREAR. The harbor channel is about 10 miles long, isn't it—something like that?

Col. NEWCOMER. It is a very long channel across shoal water in the Mississippi Sound. The project provides for such increased depth as can be obtained by the operation of the Government plant. This \$80,000 is simply the estimated cost of operating the Government plant for the fiscal year.

Mr. FREAR. Does this provide for increasing the depth?

Col. NEWCOMER. I think it may increase it slightly, but not very much. That would be required mainly for maintenance.

Mr. FREAR. What is the depth there now?

Col. NEWCOMER. Substantially 19 feet is what they have already secured.

Mr. FREAR. How much was built by the railroad originally, and what was the original depth they acquired?

Col. NEWCOMER. They provided a 19-foot depth, under a certain agreement, you know, that they would receive a certain sum—which they claim was much less than the cost to them.

Mr. FREAR. They had a project of 19 feet when they turned it over to the Government?

Col. NEWCOMER. Yes, sir.

Mr. SWITZER. What is the depth now?

Mr. FREAR. They have increased the depth there slightly, haven't they?

Col. NEWCOMER. No; they have not substantially increased that amount. As a matter of fact, I think the depth reported on the 30th of June was about 17 feet. It had shoaled somewhat at that time. But 19 feet has been provided, and to that extent it would be maintenance. Anything beyond that would be further improvement.

These projects at Gulfport and Pascagoula, and also at Mobile, are rather singular from the fact that the boats can go out drawing more water than they actually have in the channel. The bottom is so soft that they can actually drag into the bottom to some extent—for a foot or two.

The CHAIRMAN. If that is necessary?

Col. NEWCOMER. Yes, sir; if that is necessary.

The CHAIRMAN. The maintenance of that channel is somewhat expensive at Gulfport and Ship Island Pass.

Col. NEWCOMER. Oh, yes, it is; it requires substantially this amount.

The CHAIRMAN. The next item is Pascagoula River, Miss., \$10,000 for maintenance. And in the same group is Biloxi Harbor, \$5,000 for maintenance.

Col. NEWCOMER. The Pascagoula River requires substantially that amount annually for snagging operations. The work on its tributaries, the Chickasahay and Leaf Rivers, has been practically aban-

done. The Pascagoula has a sufficient amount of water, but that amount is necessary to clear away the snags. There is a substantial amount of lumber on that river.

Mr. FREAR. They have a large number of boats building there?

Col. NEWCOMER. That may be; I do not know about that. Oh, you mean down at Pascagoula Harbor?

Mr. FREAR. Yes.

Col. NEWCOMER. That is not in the Pascagoula River project. I think that is the Dog River, where the boats are being built.

Mr. FREAR. How far up the river does this extend?

Col. NEWCOMER. This goes up the river, I think, in the neighborhood of 80 miles, or so.

Mr. FREAR. Is there any commerce up there that far?

Col. NEWCOMER. Oh, yes.

Mr. FREAR. What kind?

Col. NEWCOMER. Timber.

Mr. FREAR. Timber entirely?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Then the work performed by the Government is largely in digging out snags?

Col. NEWCOMER. Yes, sir; entirely.

Mr. FREAR. It is entirely?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What do you say as to the advisability of the Government constantly digging out snags that are placed there by the mill dams?

Col. NEWCOMER. Oh, no; these are snags which largely come from the streams above—the Leaf and Chickasahay—which are both streams with rather friable banks. During the freshet period the banks cave and trees fall into the river, and the stream brings them down. I have no doubt we do occasionally get some logs which are lost from rafts, and things of that kind.

Mr. FREAR. Each year I notice they take out a great many snags and logs.

Col. NEWCOMER. Yes; they do. I understand that some private parties there are now recovering some of the logs lost in that part of the river.

Mr. FREAR. Of course, the Government does not get any benefit from that.

Col. NEWCOMER. Oh, no.

Mr. FREAR. But we keep digging out and removing the snags.

Col. NEWCOMER. We proposed here last year——

Mr. DUPRÉ. In the Sabine River?

Col. NEWCOMER. Yes; in the Sabine River—that you make a provision that material of that kind—logs recovered by the Government—should become the property of the Government, to be sold to pay the expense of clearing the channel from obstructions. For instance, when wrecks occur, if they are abandoned, whatever is removed becomes the property of the Government, and we would like to have the same rule applied to logs.

Mr. FREAR. What was the reason (I think one was urged by Mr. Mann) that was abandoned?

Col. NEWCOMER. I do not recall.

The CHAIRMAN. I know there was objection to it. I know or think one of the objections to it was based upon the fact of the authority of Congress to do that.

Mr. FREAR. Yes; that is it, as I recollect it—a question of the authority resting in Congress to undertake the authorization of it.

Col. NEWCOMER. It seems to me Congress would have the right to declare anything of that kind an obstruction, just as it declares a wrecked barge or pier or anything of that kind to be an obstruction to be removed. And whatever is obtained in its removal becomes the property of the Government to help defray the expenses.

Mr. FREAR. What becomes of the logs and deadheads that are taken out by the Government and removed each year?

Col. NEWCOMER. Most of the material we remove, of course, is snags, stumps, and things of that kind, which are not usually in shape to be used as timber—I mean they are not worth much as timber. The snags are destroyed. The logs which are marked can, I suppose, be claimed by their owners.

Mr. FREAR. We dredge the river out and give them the logs after they are recovered?

Col. NEWCOMER. If they claim them.

Mr. FREAR. If they claim them.

Col. NEWCOMER. Because the local laws, I believe, give them the privilege of recovery.

Mr. FREAR. That is a great object, it seems to me, for the local people to have that work done by the Government each year.

Col. NEWCOMER. The logs form but a small part of the obstructions removed.

Mr. DUPRÉ. They have no commercial value, have they—the snags?

Col. NEWCOMER. The snags do not, but the logs do.

Mr. DUPRÉ. The logs do, of course.

Mr. OSBORNE. Is not the proportion of logs, of course, very small?

Mr. FREAR. Have you ever looked it up?

Mr. OSBORNE. I lived down there for 12 years, and I have been on all of those rivers—the Pascagoula, Tchefuncta, and all those rivers—and I have traveled hundreds of miles over them. I never saw a log in the shape of a snag in my life that I remember.

Col. NEWCOMER. I think we only get those logs sometimes when they are caught on a bar, a shoal place, when they become water-logged, and after becoming lodged in this way they become a source of obstruction.

Mr. FREAR. I might give some information on this. On page 2499 we find, on the Pascagoula River, "logs cut up or stumps leveled on bank"—of course that couples them together—811 on one river, 1,168 on another, making a total of 1,979; logs removed from drift piles, 48; logs removed from river, 375. That shows the proportion of logs.

Mr. OSBORNE. That, Mr. Chairman, does not in any way controvert what I said, that I had never seen a saw log in the shape of a snag in my life that I remember of. Of course, they get them in those drifts, but not as a snag. A snag is a tree sticking up in the river, roots down, pointing down stream, and a steamer coming up stream runs her bow into the snag.

Mr. FREAR. This is headed "Snagging operations."

Mr. SWITZER. They come out as snags.

Mr. FREAR. This is in the engineer's report and is headed "Snagging operations," and it speaks of logs removed by the Government and then turned over to the mill company without charge. I am just trying to get at the policy of the Government conducting business that way.

Mr. OSBORNE. I think the Government ought to have them.

Mr. DEMPSEY. The only question is whether there is enough in it; but certainly they ought not to turn them over to those people, because, as you say, it is just a reason for their carrying on their operations entirely different from the normal and regular way.

Col. NEWCOMER. While 375 logs were removed from the river, there were about 3,204 snags, or about ten times as many snags as logs.

The CHAIRMAN. I think these are the facts about logs which have a commercial value, that they are usually dropped from rafts and, as a rule, they are either nonfloatable or become nonfloatable, or else they sink to the bottom or go farther down until they meet some current action or where they meet some obstruction and are stopped, generally near the outlet, as the colonel has explained.

And I think it would be advisable for the committee, when we come to consider new legislation, to consider whether we will not incorporate in the bill a provision similar to the one in the last bill, or something substantially similar, because the Government having control of navigation and removing these logs (that have a commercial value) for the purpose of improving the navigability of a stream, ought to have the benefit of whatever value they have in the market when they sell them. Of course in this particular instance the great cost is of snags, trees, and other material, which come from the banks when they erode, and which come down the river and obstruct the channel and therefore have to be removed. And as a rule they have very little or no commercial value.

Mr. FREAR. The total number of obstructions removed last year by the engineers seems to have been 48,852 of various kinds. The year before, according to the record, it was 18,203. I am not sure whether that is on the same stream. But it appears the engineers are engaged practically all the time in removing obstructions. That is all you say is there?

Col. NEWCOMER. Yes; that is all.

Mr. FREAR. There is no dredging or anything of that kind. And under the head of logs and snags there were 1,127 logs removed from the river last year, as appears on page 2400 of the report for the previous year.

The CHAIRMAN. I would like to ask the colonel this question: We have a law making it unlawful for those that move rafts to drop logs in a navigable waterway, or, if they drop them, making it their duty to pick them up, which law does not seem to be generally enforced.

Col. NEWCOMER. I do not think it is a law exactly, Mr. Chairman, it is an office regulation. We have adopted regulations of that character on a number of streams. And there may also be a special basis of law for it. But I know we have regulations in some cases on certain canals and waterways. For instance, I know the Secretary of War has approved regulations covering that matter. And persons violating them are subject to prosecution if they can be detected.

The CHAIRMAN. I will not take the time to look it up now, but my recollection is distinct there is such a law.

Col. NEWCOMER. It may be in a law as well as regulation.

The CHAIRMAN. And I think if the specific attention of the district engineers in those localities where the logs are dropped were called to the matter, where there is no effort made to recover them, that would stop a good many of the obstructions of that kind.

Mr. SWITZER. Where the logs have been cut and the river rises and they drift into the stream, how are you going to prosecute there?

The CHAIRMAN. There are some instances of that kind, but, as a rule, they have been dropped from rafts.

Mr. FREAR. It makes a very simple proposition to have the Government follow those up if profitable to do so.

The CHAIRMAN. Have you any comment to make on the Biloxi Harbor?

Col. NEWCOMER. No, sir; the funds on hand are practically exhausted, and we expect that \$5,000 will be necessary for restoring the channel at Biloxi Harbor.

The CHAIRMAN. We now come to the New Orleans district, and the first item there is passes of the Mississippi River. There is an estimate of appropriation for the Southwest Pass for further improvement of \$1,150,000 and an item of \$250,000 for the South Pass, which is for maintenance. Colonel, what have you to say about the passes and the sufficiency of the appropriation to maintain the channel depth.

Col. NEWCOMER. The amount estimated for further improvement of Southwest Pass, as given here, was considered to be the amount that could be expended to advantage in the next fiscal year or until another bill is passed at the next session of Congress. You will observe that there was a considerable sum on hand at the beginning of the fiscal year on account of the appropriation made by the last Congress. Mr. Sanders, you will recall, suggested that the entire balance required to complete, of about \$2,500,000, be appropriated at this time. We of course would have no objection to having that much money and would spend it as rapidly as we could under the conditions that obtain. But the amount we considered necessary and that we ought to have is at least this \$1,150,000. The \$250,000 for maintenance of South Pass is in addition to the permanent annual appropriation of \$100,000 for the maintenance of that pass. That permanent annual appropriation was authorized some years ago and is quite inadequate under present conditions. The flow through South Pass has been considerably enlarged. And not only is there necessity for restricting the flow through Pass a Loutre, as already indicated by repairing the sill there and strengthening that, but also we need additional sills at the entrance of South Pass so as to reduce the flow through it and throw more water through Southwest Pass.

The CHAIRMAN. Would this appropriation for the Southwest Pass be available for those repairs at Pass a Loutre?

Col. NEWCOMER. Yes, sir. We consider that work required there as a part of the improvement at Southwest Pass, because it is to control the flow to that point.

The CHAIRMAN. Colonel, I will ask you this question: I do not think there is any disposition on the part of the committee to restrict

any appropriation that may be necessary for the passes; but it appears that 90 per cent or more of the commerce up to this time uses the South Pass.

Col. NEWCOMER. That is true; yes, sir.

The CHAIRMAN. And it is of greater depth?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Now, in view of that and the further fact that the Southwest Pass is still under construction, would it be advisable to reduce the appropriation for the Southwest Pass to any extent on account of war conditions; or do you think that would react?

Col. NEWCOMER. I think it is very desirable indeed to have that amount, because South Pass itself is in a rather critical condition. The jetties are suffering considerably by the encroachment of the channel, so that they feel very uneasy about the security, or permanency of the channel through South Pass. It is important for that reason to complete the Southwest Pass as promptly as we can.

The CHAIRMAN. There is a break in the jetties on the east side, isn't there?

Col. NEWCOMER. Yes, sir. And we feel very uneasy about that situation. We probably can maintain them for several years, but in view of the expenditures such as we are now undertaking, it is very desirable to expedite the other work as much as we can.

Mr. DUPRÉ. If that is the case, why is it not being expedited?

Col. NEWCOMER. It is being expedited.

Mr. DUPRÉ. Have not bids been rejected recently, Colonel, for Southwest Pass because the department thought they were excessive?

Col. NEWCOMER. That is very true. Bids for bulkhead construction in the Southwest Pass were rejected. We are trying, of course, to prosecute the work with due regard to economy. That gives a perplexing situation sometimes, as to whether the consideration of economy or the other should prevail. We are handling that situation, of course, as best we can.

Mr. DUPRÉ. I am not criticizing the department, but I was wondering if you gentlemen had any idea there would be any reduction in those bids in a comparatively short time—in the next five years, we will say?

Col. NEWCOMER. There has already been a proposal to reduce the bid to a certain extent.

Mr. DUPRÉ. Is that appealing to the engineering office in any substantial way?

Col. NEWCOMER. The reduction is not large, about 6 per cent, and on that, of course, we had to get the views of the district engineer as to the propriety of accepting it. While we consider it desirable to expedite the work, we of course do not consider it advisable to undertake the work regardless of expense.

Mr. DUPRÉ. Can you give me any information as to the amount of this bid—roughly?

Col. NEWCOMER. I think it is about \$68 per linear foot.

Mr. DUPRÉ. I mean in round numbers.

Col. NEWCOMER. The amount involved I do not now recall. It was a number of hundred thousand dollars involved, I remember.

Mr. DUPRÉ. It would make considerable encroachment upon the sum reported here as being available from the last bill, would it?

Col. NEWCOMER. Oh, yes.

Mr. DUPRÉ. In other words, you need this million dollars more?

Col. NEWCOMER. We consider that at least should be provided, and that sum represented our judgment as to the amount it would be well to appropriate at this time.

Mr. DUPRÉ. What did the district engineer recommend?

Col. NEWCOMER. He recommended a little over \$2,000,000.

Mr. DUPRÉ. Which would have provided for the completion of the entire project?

Col. NEWCOMER. No; it would not quite. As a matter of fact, his recommendation was \$2,145,000.

Mr. DUPRÉ. That would have left \$300,000.

Col. NEWCOMER. \$2,425,000 is the total estimate for completion; yes, sir.

Mr. DUPRÉ. Including \$1,000,000 that is proposed to be appropriated here?

Col. NEWCOMER. That is right.

Mr. DUPRÉ. That would be about \$1,300,000 more?

Col. NEWCOMER. That is right. The amount of money on hand there was so large that, considering the rate of the expenditures they have been able to make up to date, we felt this was all they could properly expend to advantage.

Mr. FREAR. Do you expect to use the dredge under the control of the Mississippi River Commission on this work, or just at the upper end of the river?

Col. NEWCOMER. They are not Mississippi River dredges; it is the revetment plant we want to use on this work.

Mr. FREAR. That will not be used at the Southwest Pass?

Col. NEWCOMER. Yes; that will be used under the Southwest Pass funds, because that is where it is intended to control the flow to Southwest Pass. In other words, this Pass a Loutre is at the head of the Southwest Pass.

The CHAIRMAN. And it requires the equipment which the Mississippi River Commission has on hand and which it is necessary for them to have in the performance of their work, and which is a very expensive class of plant and a plant which is not possessed by the New Orleans district.

Col. NEWCOMER. I may say this work has its own dredges, but has no revetment or mattress plant. That is what we want to get from the Mississippi River Commission.

The CHAIRMAN. I made inquiry as to whether this appropriation might be reduced or not, because it is quite a large amount, and inquiry might be made in the House as to the large sum appropriated here for the Southwest Pass.

Mr. DUPRÉ. I thought at first your tongue had slipped and you meant shouldn't it be increased.

The CHAIRMAN. I ask a good many of these questions in order to get them in the record, anticipating questions that will be asked on the floor of the House.

STATEMENT OF COL. HENRY C. NEWCOMER, ASSISTANT TO THE CHIEF OF ENGINEERS, UNITED STATES ARMY, JANUARY 4, 1918, FOLLOWING THE HEARING HELD ON THAT DATE ON PASSES OF THE MISSISSIPPI RIVER.

Col. NEWCOMER. The work at Pass a Loutre, to which Mr. Sanders refers, and at the head of the South Pass, is all provided for by money in hand. It is only a question of getting the plant to do the work.

The situation which Mr. Sanders presented to you was brought to the attention of the Chief of Engineers early in December, I think it was, and upon learning the attitude of the commission the papers were sent to the district engineer at New Orleans, who has charge of the improvement of the Passes, with instructions to report upon the situation and send it through the division engineer and get his comments and then through the district officer, who has the plant, to the Mississippi River Commission, or rather to Gen. Bixby, the president of the commission, and indicated the view of the office of the Chief of Engineers that the use of that plant should be determined, not by the appropriation to which it belongs, but by the paramount public necessity. In other words, if this Pass work is the more important, the equipment should be diverted. It was stated that was the way in which the office of the Chief of Engineers would look upon it.

We have not yet received that report, so that we do not know what attitude the commission will take. In case of urgency, of course, time is really a considerable element, and it is hard to get prompt mail transmission under present conditions of rail transportation. Moreover, the report has to go through so many people, and while an early response ought to be had, you must remember it will take time; but I do not think the Chief's office would hesitate to divert that plant, if necessary.

Mr. FREAR. Have you the authority to do so?

Col. NEWCOMER. I think so.

Mr. FREAR. If not, the suggestion of Mr. Sanders might be important at this time, that the committee also express its desire to have it used in that way, because this work is one of great emergency.

Col. NEWCOMER. Yes. Of course, the Chief of Engineers would not desire to take action without hearing from the different parties concerned, because he does not know precisely upon what work this plant is now engaged. It may be that where they have it the work is very urgent now, as, for instance, on bank revetment to protect levees that are threatened by caving of banks. He would only act upon the whole presentation, but there is authority, I think, lodged in the Chief of Engineers to commandeer that plant.

Mr. FREAR. You do not think it necessary to have the committee take any action?

Col. NEWCOMER. I hardly thing it necessary at all, in that respect.

The CHAIRMAN. Before the colonel leaves the Passes, I think, if it meets the approval of the committee, I will make this statement, which I think will be approved by all the members who were there—that from the standpoint of laymen, not as engineers, we were impressed

with the importance of it, and that it ought to be done before the next flood waters in the Mississippi. I personally was so much impressed with it—I think I discussed it with some of the members, maybe with you—that I wrote a letter to Gen. Bixby and the Mississippi River Commission telling them what my impression was and I thought the impression of this committee, that they ought to cooperate in furnishing their equipment. I never received any reply. But as Mr. Sanders says, that is the entrance to the Mississippi Valley, so far as water transportation is concerned, and it is very important, undoubtedly, to see that nothing happens to interfere with it.

Mr. FREAR. Is the Mississippi River Commission under the Engineers Department in any way, Colonel?

The CHAIRMAN. Oh, yes.

Mr. FREAR. They are acting upon the orders of the Chief of Engineers?

Col. NEWCOMER. The flood-control act says the work should be carried out in accordance with the plans of the Mississippi River Commission, as approved by the Chief of Engineers. Therefore, it makes it all subject to his supervisory control. As a matter of fact, we have had very little occasion to modify the action taken by the Mississippi River Commission, because they are satisfactorily handling the work. The only case, so far as I know, that has come up has been at Memphis, where the Chief of Engineers rather insisted upon providing more liberally than they had themselves been willing to do.

Mr. FREAR. Heretofore has the question ever come up of any conflict between the Mississippi River Commission and the Chief of Engineers about the Mississippi River Passes?

Col. NEWCOMER. No, sir. There is not any conflict now about the appropriation; it is about the plant. They have the money now to use the plant on their own work and want to use it, and say the plant should not be used under any other appropriation until their own money has been exhausted. Hitherto whenever the work was of such emergency as required the use of the plant, I understood it always had permitted its use. It may be that was simply because they did not have then funds of their own with which to do the work; I could not tell about that. But this is the first time there has been lack of willingness on their part to give the plant; that is, as far as I know.

The other question about the Passes that Mr. Sanders brought up with reference to the early completion of the Southwest Pass—that involves the construction of the inner jetties, as he mentioned. And the plan now is to build bulkheads which will narrow the waterway sufficiently to confine the flow.

The CHAIRMAN. Some of which have already been constructed?

Col. NEWCOMER. Some of which have already been partly constructed; and also to build spur dikes which run out from the main jetties to the line of inner jetties.

Mr. FREAR. What proportion would you say has been completed: about a third?

Col. NEWCOMER. Probably about a fourth has been completed: I could not say more closely than that. The money provided in August was intended to be applied partly to the continuation of that bulk-head work and also to the building of spur dikes. It happened early in December, I think it was, that bids were received for that bulk-

head at very much increased prices. They have a contract now, for instance, which, I think, runs about \$38 a foot, and the new bids were about \$66 or \$68.

Mr. FREAR. Double?

Col. NEWCOMER. Pretty nearly double what they were before. They figured that due allowance for the increase in the cost, the increased price of labor and material, etc., would place it somewhere in the fifties, say about \$54 or \$55 a foot. Now, as I say, in addition to the bulkheads, which are inner longitudinal jetties parallel to the old, we propose building the spur dikes and have a plant of our own which can be used on the construction of the spur dikes, which will partially accomplish the same purpose as the inner jetties.

Mr. FREAR. A Government plant at the jetties is now doing the dredging?

Col. NEWCOMER. Yes.

Mr. FREAR. And the contract work of building the jetties is private?

Col. NEWCOMER. Yes; for the jetties; but not for the spur dikes. We have a plant for that but not for the longitudinal jetties.

Mr. FREAR. How many contractors are working on that now, generally speaking?

Col. NEWCOMER. I think there is one contractor building the bulkheads there, and one for furnishing the stone. That is my impression.

Mr. FREAR. And it is those contracts which you can get renewed only at a larger price?

Col. NEWCOMER. Yes; that is the situation up to the present moment. We just got a telegram this morning from a contractor offering to reduce his price to a certain amount providing certain concessions be made, but that, of course, must be investigated before reaching a decision.

Mr. FREAR. What was his name?

Col. NEWCOMER. I do not recall.

Mr. FREAR. I was wondering if he was not with us on the trip.

Col. NEWCOMER. I do not recall. The amount required, according to the original estimates to be appropriated for the completion of the project is given on page 25 of your estimates.

Mr. FREAR. I suppose that would not be of much value, in view of the increased costs.

Col. NEWCOMER. It is very doubtful whether that will complete it. The amount estimated to complete was \$2,425,000. The amount we included in the annual report as an estimate for additional work for one year is substantially one-half of that—\$1,150,000.

Mr. KENNEDY. How long would it take to complete that project if all the money necessary was available and you could get the plants you have there.

Col. NEWCOMER. You mean if we had all the money?

Mr. KENNEDY. Yes; had all you needed and had the plants continually working on the project. How long would it take to complete it?

Col. NEWCOMER. I think it would take about three years.

Mr. FREAR. What amount of money have you on hand now for these projects?

Col. NEWCOMER. The amount available there is \$2,000,000. That is, at the first of the year. Of course, that was one of the elements that led us, in the office of the Chief of Engineers, to reduce the estimate

coming in from the office of the district engineer—to reduce this amount to \$1,150,000—that fact, together with the fact that the appropriation of the succeeding session of Congress would be available the 4th of March, 1919. We felt that this additional amount estimated for here would probably provide all that we could spend to advantage in the intervening time.

Mr. FREAR. You speak about this additional amount. How much have you included in this estimate?

Col. NEWCOMER. \$1,150,000.

Mr. KENNEDY. Is there any advantage of a continuing contract in a case of that kind?

Col. NEWCOMER. Yes. There may be if the conditions, of course, are favorable for making a continuing contract. If this had all been placed under a continuing contract when we negotiated the contract about two years ago, it would have been upon very favorable terms and conditions to the Government, but the contractor would probably have been broken by this time.

Mr. KENNEDY. Yes; I realize that.

Col. NEWCOMER. But just now a continuing contract for its completion would be a rather questionable proposition.

Mr. KENNEDY. You think it would not be to the advantage of the Government to do it?

Mr. OSBORNE. This has reference entirely to the Southwest Pass?

Col. NEWCOMER. Yes.

Mr. OSBORNE. I did not go with you on that trip, but I am very familiar with the mouth of the Mississippi River from being there for many years; and that work at South Pass seems to me to be of very great importance. The formation of those mud lumps, which is constantly going on, will cork them up. And take the whole Mississippi River, it is like a big bottle and that is the entrance, and if you choke up the entrance it does not matter what you do up above. The entrance must be kept clear.

The CHAIRMAN. That is emergency work which Col. Newcomer spoke about.

Mr. OSBORNE. Yes; at Pass a Loutre.

The CHAIRMAN. We will now proceed to the hearings on the estimates.

HEARINGS OF JANUARY 8, 1918—Continued.

The CHAIRMAN. Still continuing Louisiana, the New Orleans district, there is an item for the Calcasieu River and Pass, an item of \$5,000 for maintenance.

Col. NEWCOMER. That is required for maintenance, particularly in Calcasieu Lake, where the channel is subject to shoaling continually, and we need that amount to restore it. It is substantially the same amount we have available for the present year. We need that amount for next year.

The CHAIRMAN. The next item is for removing water hyacinths in Louisiana, \$20,000.

Mr. DUPRÉ. That includes the States of Alabama, Mississippi, and Texas, as well, does it not?

Col. NEWCOMER. Yes, sir. It is mainly in Louisiana, of course. These waterways are the ones that are particularly affected by water hyacinths, and that is the amount we require.

Mr. DUPRÉ. I know the fund is applicable for use in the four States under the law, or at least it was in the previous bill. I know Mr. Harrison slipped in Mississippi one year.

Col. NEWCOMER. I know it is in one bill, but this reads "Louisiana" here.

The CHAIRMAN. How does that item read in the last bill, Mr. McGann?

The CLERK. Alabama, Mississippi, Louisiana, and Texas.

The CHAIRMAN. What was the amount?

Col. NEWCOMER. \$20,000.

The CHAIRMAN. That verifies Mr. Dupré's statement, Colonel.

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. There is local cooperation, is there not, in the removal of these water hyacinths?

Col. NEWCOMER. Yes, sir. The localities assist, as I understand, by patrolling the streams more or less and keeping the plant in motion.

The CHAIRMAN. That matter of local cooperation is set forth at the bottom of page 946 and the top of page 947.

Mr. DUPRÉ. And they look after the booms, too?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Galveston district. The first item is Galveston Channel, Tex., for maintenance, \$100,000; for further improvement, \$200,000.

Will you explain the character of maintenance and also the purpose for which the \$200,000 for further improvement is to be used?

Col. NEWCOMER. Galveston Channel is the channel in the interior harbor, and experience shows that we need about this sum of \$100,000 to operate our dredges and maintain the project depth of 30 feet.

The \$200,000 for further improvement is for the extension of the sea wall, which was authorized in 1916. That law required certain local cooperation, which has now been effected, so that the work is proceeding. The locality is to expend between six and seven hundred thousand dollars, completing the first portion of the extension, and the Government is then to extend the wall from there over to the military reservation, and this amount that we have estimated here—\$200,000—is the amount we feel can be expended to advantage in the next fiscal year.

The CHAIRMAN. What about the proposition for the increased depth above 30 feet over the bar?

Col. NEWCOMER. There is a favorable recommendation now before Congress for providing a depth of 35 feet over the bar, which, by the way, I think involves no additional appropriation. The depth of 30 feet was secured a number of years ago, and, in fact, the depth is now about between 32 and 33 feet. The channel maintains itself with practically no dredging except sometimes dredging has been required to improve the location of the channel. The channel now is in a much better location than formerly, and, as I say, is something over 30 feet deep in depth, and it looks as though a 35-foot depth could be provided at a very moderate expense, and recommendation was made to authorize the use of the available funds to provide the 35-foot depth and maintain it for two years to see whether or not the expense of maintenance would be large. That 35-foot channel

would extend a mile or more beyond the jetties, and the question is how that portion of the channel out there would maintain itself.

Mr. DUPRÉ. You say there are funds on hand available for that?

Col. NEWCOMER. Yes. You see the first item—Galveston Harbor, Tex.—there is \$364,000 on hand. The larger part of that is for repairing the jetties, and there are sufficient funds in that to also dig to 35 feet if it is authorized by Congress.

Mr. KENNEDY. What depth have they?

Col. NEWCOMER. Thirty feet, project depth; actually over 32 feet.

Mr. DUPRÉ. You mean if authorized by Congress in this bill.

Col. NEWCOMER. Whenever Congress authorizes it.

Mr. DUPRÉ. There is a report before Congress from the Chief of Engineers?

Col. NEWCOMER. Oh, yes.

The CHAIRMAN. In connection with that I will say the commercial interests of Galveston are exceedingly anxious to have that authorized and I have seen their representative, who wants to make a statement before the committee before we finally pass on the bill. The new project provides for this new 35-foot channel, and for which it is believed no additional appropriation is necessary and it is not proposed to make any additional appropriation for it, as they report the amount on hand will be sufficient to secure that increased depth. The estimated cost of that additional depth, as I remember, is placed at only \$65,000 which it is believed can be spared from the available amount on hand.

Mr. KENNEDY. What I had in mind was whether it is necessary to provide 35 feet outside, at the bar, when they have only 30 feet inside.

Col. NEWCOMER. That is the entrance, you know, and of course that is exposed, and the boats passing in there, and going out over the bar, are more or less subject to the waves caused by storms.

Mr. KENNEDY. You say you have 32 feet out there now?

Col. NEWCOMER. Between 32 and 33 feet.

The CHAIRMAN. It is a bar, and it is not unusual at a port to provide a greater depth at the bar, on account of storm and wave action than in the channel leading up to the port, of course. The project we adopted for Boston provided for a greater depth over the bar, for the same reason.

Col. NEWCOMER. There is one point at the mouth of the Columbia River, you know, where there is 40 feet on the bar and 30 feet inside.

Mr. KENNEDY. Yes; that is true.

Col. NEWCOMER. There is a very heavy wave action there.

(See Appendix A, page 174—a telegram from the president of the Galveston Wharf Company, in regard to ownership and operation of its property.)

The CHAIRMAN. Next is the Dallas district: The Sabine-Neches Canal, including the Sabine River to Orange and Neches River to Beaumont, \$20,000 for maintenance. That is the only estimate of appropriation in that group.

Col. NEWCOMER. That is for the maintenance of the section of the canal leading up to Orange and Beaumont on the two rivers, which the Government is under obligation to maintain. The other sections represented by the two rivers here are to be maintained by the local interests for a certain period.

Mr. KENNEDY. About what is the average amount required there for maintenance, Colonel?

Col. NEWCOMER. Substantially this amount annually, between \$20,000 and \$25,000

Mr. DUPRÉ. There has been a rather remarkable development in that Beaumont section?

Col. NEWCOMER. Yes.

The CHAIRMAN. The members of the committee who visited that section will recall the section where this money is to be expended.

The next item is for Cypress Bayou, and waterway between Jefferson, Tex., and Shreveport, La. That is the only estimate for that group, \$5,000 for maintenance.

Col. NEWCOMER. That represents substantially the annual cost of that waterway. It is a detached waterway. A dam has been built on Lake Caddo which separates this from its outlet to the Red River, and on this waterway there is a substantial movement of traffic to the railroad at Jefferson.

(Thereupon, at noon, the committee adjourned to Wednesday, January 9, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 9, 1918.

The committee met at 11 o'clock a. m. and proceeded with the hearing on the estimates. Hon. John H. Small (chairman) presiding.

The CHAIRMAN. Gentlemen, we will proceed now with the hearing on the estimates, page 30 of the committee book.

The first is the Vicksburg, Miss., district, and the first item for which an estimate of appropriation is made is the Red River below Fulton, Ark., \$50,000. And in the same group are the Ouachita and Black Rivers, Ark. and La., \$20,000 for maintenance and \$100,000 for further improvement.

Mr. BOOHER. Is that for further improvement on the Ouachita or Black River?

Col. NEWCOMER. The Ouachita. The \$50,000 on the Red River is simply carrying out the plan that was adopted two years ago of providing a sum sufficient to snag the river thoroughly up to Shreveport, in view of the proposition that was made by the local interests there to put on a barge line and give them an opportunity to try out navigation under such a plan. The funds on hand with this amount would be sufficient to provide for that work for this and the next fiscal years. The estimated cost is \$55,000 a year. Part of the funds on hand are funds that are pledged for levee work, so that we have substantially \$60,000 on hand for this work this year, and we ask for \$50,000 more to provide for the two years' operation.

Mr. FREAR. What do you think about the progress that has been made on the Red River and the desirability or necessity of this appropriation of \$50,000 at this time?

Col. NEWCOMER. The progress made has not been great.

Mr. FREAR. You had \$70,000 there on hand?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And you are asking for \$50,000 more?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. The commerce reaches 43,000 tons, but 21,000 and some odd tons is timber that was hauled by the owners a few miles,

and about 11,000 or 12,000 more in staves hauled a short distance. That takes the larger part of the commerce. Is there much commerce on the river?

Col. NEWCOMER. Very little. As I say, it is not satisfactory.

Mr. FREAR. All the commerce is carried a distance of 35 miles. The Red River is how long?

Col. NEWCOMER. Over 400 miles.

Mr. FREAR. It is all uniformly carried, according to the Engineer's Report, on page 3626, a distance of 35 miles. Do you think, after having spent \$2,800,000 on this project, and with \$70,000 now on hand, that it is necessary for the Government to advance \$50,000 more at this time for the improvement of this 400 miles of river?

Col. NEWCOMER. The only ground on which it is recommended is that these people pledged themselves to contribute the capital to build barges and establish a barge transportation to Shreveport. We were to keep the river open sufficiently to let them do that. They have taken some steps to do that, although they have not proceeded as rapidly as they should in the matter. I question very much whether it will be a successful experiment; but, at the same time, that arrangement was made, and Congress entered upon it, and I think it is probably as well to carry it out.

I might state this, that there will be, I think necessarily, certain expenditures on the Red River, even if this present experiment is not successful. It is necessary to keep the stream open if they want to prevent its forming rafts, as it did in former times, so as to keep the river from being filled entirely and spreading over the surrounding country; in other words, to keep the stream open as a water-course certain snagging is necessary. That would cost \$25,000 or \$30,000 a year.

Mr. FREAR. What distance is it necessary to keep the stream open—for the full 400 miles?

Col. NEWCOMER. Oh, yes, sir; further than that.

Mr. FREAR. This 25 miles' carriage of commerce, which is uniform—how did it come about that every one of these 20 or 30 items is hauled just 35 miles?

Col. NEWCOMER. I could not explain that.

Mr. FREAR. I was wondering whether there was any particular part of the river where this commerce was carried on.

Col. NEWCOMER. I think it is scattered along the river, but mainly on the lower part. They give there the average distance.

Mr. FREAR. It shows they have carelessly prepared these estimates, if that is the basis of it, unless it was carried between certain points, because if the items were going to different points it would be impossible for all of them to be carried for an average distance of 35 miles. It would be a mathematical impossibility.

Col. NEWCOMER. It does not look reasonable; I admit that. But I think that the commerce, of course, is mainly on the lower part of the river at Alexandria and vicinity and points below that. There is a little commerce to higher points, but very little.

Mr. FREAR. They have 16 barges that they mention; are those running there?

Col. NEWCOMER. I think that is on the lower river; they do not have the barge line in operation which they promised to put in operation.

Mr. FREAR. That is registered on page 2626 as being of use, isn't it?

Col. NEWCOMER. Most of the traffic, you will understand, on those rivers aside from rafting is in barges, but the particular barge line which it was expected would be made possible by this work, up to Shreveport, has not been organized and has not been put in operation.

Mr. FREAR. How much will you use during the coming year on this project?

Col. NEWCOMER. If you will notice in the annual report, page 1050, for each improvement we give a financial summary, and in that financial summary we give the expenditures for the past five years, both for new work and for maintenance. In this particular instance the expenditures reported for this year are \$44,000 and for the preceding year \$46,000. The estimated cost of this work to keep the channel open—of course, we have not done quite all the work that would be necessary if the boats were moving, because they are not now actually in operation, but the estimated expense of keeping the channel clear up to Shreveport is \$55,000 a year. We have substantially \$60,000 on hand, and \$50,000 added to that would make \$110,000, the amount required for two years' operation. We may get along with somewhat less than that, and if the boats do not operate probably will, but we thought we ought to have the funds on hand so that the Government could do its work and they could not claim it was through a lack of Government assistance that the experiment failed. It seems to me it is probably the last experiment that will be made for some time to come for fostering navigation on the Red River.

Mr. FREAR. You mean that this will be the last appropriation you think will ever be made of the kind?

Col. NEWCOMER. I think that is probably the case, unless this project is more successful than I anticipate. We will probably require no further appropriation except the appropriation simply to keep the river from forming rifts.

The CHAIRMAN. I call attention to the paragraph on page 1050 of the annual report entitled "Recommended modifications of project," and I will read from it:

March 24, 1916, the Chief of Engineers recommended discontinuance of work under the existing project and the prosecution only of work necessary to prevent the formation of rafts above Shreveport and of snagging and removal of obstructions below Shreveport for a period of three years, at an estimated cost of \$55,000 annually, at the expiration of which period reports should be made to determine the advisability of continuing, modifying, or abandoning the project, the work below Shreveport being conditionally recommended.

I think we have already made one appropriation under that recommendation, and this would be the second, would it not?

Col. NEWCOMER. No; we have made two. This will be the third appropriation. We made one in 1916 and one in 1917, and this is the third one. At the end of the third year it is expected that a further report on the situation will be submitted.

Mr. FREAR. Colonel, in comparing the commerce in the 1916 and 1917 reports, it appears in each case, for instance in 1916, that 4,851 tons of miscellaneous commerce, valued at \$727,000, were carried 35 miles. In the 1917 report—1916—it shows that there was 3,248 tons of miscellaneous commerce, valued at \$584,000, carried 35 miles—the same distance. What is the character of that commerce; do you

know?—because that is one of the large items that makes up the total valuation.

Col. NEWCOMER. What page is it?

Mr. FREAR. Page 2626.

Col. NEWCOMER. I presume from the description of that—it says 43,310 packages—that simply means it is part of the package freight carried by packet boats, or possibly by small barges and small gasoline boats, from one place to another.

Mr. FREAR. They have carried packages above, in the same list, in both years, and that is under the heading of “Provisions.” I notice, however, they do not carry merchandise, which is usually included in that.

Col. NEWCOMER. This would be the same as the ordinary merchandise item.

Mr. BOOHER. If you will look near the top you will see where 64,685 packages were carried. That shows it to have been provisions. That is evidently all sorts of packages, and there are so many of the different kinds they could not class them separately but just put them in here as miscellaneous; and the packages at the top are classed as provisions.

Mr. FREAR. You say, Colonel, you think this year will be the last recommendation for that, unless there is something developed from this barge line?

Col. NEWCOMER. Yes, sir. You will recall the discussion—

Mr. FREAR. I remember the discussion before.

Col. NEWCOMER. Yes. This Red River, of course, is one that has been very much discussed. The general attitude of the Engineer Department, for some time in the past, has been very much averse to the expenditure of money upon this stream for general commercial purposes, because there is so little commerce. However, the Chief of Engineers, a few years ago, Gen. Bixby, did recommend starting to improve the Red River on rather an extensive scale, for the control not only of the channel but the protection of adjoining lands. You know, they can only protect that land by levee construction, and, of course, levees on an unstable stream are a pretty precarious protection. You need bank revetment. But that is really a method of land protection.

Mr. OSBORNE. Mr. Chairman, may I ask Mr. Dupré—he is familiar with these conditions—what is the reason the Red River does not carry more freight. It used to carry lots of freight. Do the railroads carry it cheaper now?

Mr. DUPRÉ. I do not know, Captain.

Mr. OSBORNE. It seems a strange thing, because it is a good natural highway for commerce. I should think it would be cheaper.

Col. NEWCOMER. I think I can explain that, Capt. Osborne. The stream actually is not a good stream; that is the trouble. It does not have enough water during a great part of the year when they need the tonnage carried. In former times when water transportation was depended upon very largely they had to accommodate themselves to moving the traffic when they had the proper stage of water; and dealers then would get supplies which would carry them through for a year. Now they do not work on that basis; they work on a month to month basis. They order supplies in small quantities and expect to get them in a few days. If they will go back to the old method of

accommodating themselves to the natural conditions they could, of course, use the Red River extensively.

As a matter of fact, I might state this also: That rates that obtained on the Red River were very high in olden times, navigation was always more or less precarious. It is a flashy stream, and the water runs off very quickly. The consequence was a good many losses of steamboats and difficulties of that kind. Still, in spite of all those difficulties, it is capable of carrying commerce, but at a high cost. I question very much whether it is economically possible to carry a commerce on the Red River in competition with the railways, except on the lower portion where the depths are naturally favorable.

Mr. OSBORNE. I was familiar with the Red River 50 years ago, and there used to be a very heavy commerce on the Red River, and steamboats were arriving at and leaving from New Orleans for many Red River points. I presume they carried 10 times as much commerce then as they do now.

Mr. KENNEDY. Is not that true of all rivers?

Col. NEWCOMER. That is true, you might say, of the Mississippi River itself, really. There it is not due to any lack of channel, but to other conditions. We have not gotten a very satisfactory reason why there is not more commerce carried on the Mississippi, which has a good channel.

Mr. FREAR. One of the most remarkable statements ever made by the engineers appears in a Red River report, as I now recollect, in which it appears that a great amount of coal which can be mined would be carried on the Red River. Possibly the colonel remembers that. That was set forth in one of the hearings.

Col. NEWCOMER. That was said of the Arkansas.

Mr. FREAR. The remarkable statement was made, I remember, that many million tons would be available. But as a matter of fact, I think they carried about 12 tons last year, or possibly a very few tons on a 12-mile haul.

Mr. KENNEDY. That is on the Big Sandy.

Mr. FREAR. Oh, no; the Big Sandy is where they carried 12 or 13 tons for Government use.

The CHAIRMAN. Did you have any further comments on the Ouachita and Black Rivers, where there is an estimate of \$20,000 for maintenance and \$10,000 for further improvement?

Col. NEWCOMER. The \$20,000 is substantially the usual annual item for maintenance by open-channel work. You recall that there we are building some locks and dams. The three lower ones of the system were completed, and two other detached ones are completed. Most of the commerce there takes place during the freshet period, and in order to accommodate that commerce the stream has to be maintained, and \$20,000 is for open-channel work.

The CHAIRMAN. That is the Ouachita?

Col. NEWCOMER. Yes, sir. The \$100,000 estimated for further improvement is for continuing work on Dam No. 5. You recall, last year Congress authorized the diversion of funds that had been appropriated for Lock and Dam No. 7, Ouachita River, to the construction of Lock and Dam No. 5. Nos. 2, 3, and 4 had been completed. No. 1 has been omitted as no longer required, on account of change of location of the others. It was thought advisable to put in No. 5 instead of No. 7 and that change was authorized and has

been made; and in order to continue the work on No. 5, which should be completed as soon as possible, now it is undertaken, so as to fill that gap between 4 and 6, this additional \$100,000 is needed.

Mr. KENNEDY. Is it going to be necessary to build all those locks and dams before we can determine whether there is any substantial commerce on this stream?

Col. NEWCOMER. The department, as you recall, has recommended or did recommend that further lock and dam construction be discontinued.

Mr. KENNEDY. That was above a certain point?

Col. NEWCOMER. No, sir; not above a certain point, but that it be entirely discontinued; in other words, that we complete only the ones already in progress of construction and not build any others until the use of the ones at the lower end, where the system would be complete up to Monroe, La., should determine the advisability of further construction.

Mr. KENNEDY. As I understand this is a project where you did not start at one end and work toward the other, but you started at both ends and now have to fill up the gaps. Their contention has been, down there, that they can not develop a commerce until these gaps have been filled up.

Mr. DUPRÉ. Is not this the only one that remains uncompleted—this No. 5?

Col. NEWCOMER. No, sir. As you state, Mr. Kennedy, Congress began by authorizing one in Louisiana and one in Arkansas, then another in Louisiana and another in Arkansas, distributing the money in that way; and that resulted in the building of 2, 4, 6, and 8. Then No. 3 was put in. That gives a complete system at the lower end, up as far as Monroe, La. Nos. 6 and 8 are in Arkansas. No. 5, which is now under construction, will fill the gap between Nos. 4 and 6, of course, so that they will then have it complete up to No. 6. Whether further work should go beyond that is, of course, a question for Congress to determine when the question is submitted.

Mr. KENNEDY. Unless we do, I assume the money spent on those upper locks will largely be wasted.

Col. NEWCOMER. I think that is very likely, having gone as far as we have. We had hoped work would be started upon the commercial development with the locks already constructed. It appears now, No. 5, having been undertaken, that a further prosecution of the work so as to carry the commercial channel up to Camden, may be profitable; and we are making a study of this work above with a view of providing a channel to Camden. It was thought, for instance, by the district engineer, instead of putting in No. 7, that changes could be made in 6 and 8, with some dredging, at much less expense than for the additional dam. All that will be presented in due time.

Mr. DUPRÉ. That is the idea I had in mind, that at the completion of No. 5 it would end it. Because last year, as you suggested, it was the understanding or belief that No. 7 would be abandoned and that with the completion of No. 5 it would complete the whole system.

Col. NEWCOMER. The Engineer Department simply has information indicating the possibility of doing that. We have not had any

report that has convinced us yet that it is a practicable scheme. It may be.

Mr. DUPRÉ. I think the whole neighborhood is reconciled to that situation.

Col. NEWCOMER. It is quite possible, and probably that will be done; but we have no information yet to pass on the feasibility of that plan.

Mr. FREAR. We have appropriated so far something like \$4,200,000 on this project, and I understand when this dam you are working on now is completed that you propose to stop further work until Congress directs you to go on.

Col. NEWCOMER. Any further work would have to be based on estimates submitted, of course.

Mr. FREAR. Are you recommending that any further improvements be placed in there, in locks?

Col. NEWCOMER. We are awaiting the result of an investigation being made by the district engineer as to the feasibility of modifying the present plan, which contemplates two more locks and dams, No. 7 and No. 9. We are quite certain No. 9 can be eliminated, and it seems quite possible No. 7 can be eliminated by making changes of some extent on 6 and 8. We are awaiting the result of the investigation of that proposition before passing upon it.

Mr. FREAR. That relates to the question of transportation more particularly than to the question of the commerce being hauled; it is to see whether it is being utilized.

Col. NEWCOMER. It is to see whether it is a practical engineering proposition to provide a channel by that means.

Mr. FREAR. What do you think about the investment so far on that river of \$4,000,000, in view of the commerce we have?

Col. NEWCOMER. The commerce, of course, is extremely unsatisfactory.

Mr. DUPRÉ. Can they have any commerce until those locks and dams are completed?

Col. NEWCOMER. That is, of course, true, though navigation is possible for a considerable portion of the year. I am sorry to state that No. 4 dam failed this year.

Mr. DUPRÉ. At Harrisonburg?

Col. NEWCOMER. Just below Monroe. The base of that dam failed, due to some defect in the foundations. It had been showing some weakness ever since it was finished two years ago, and finally during this summer there was a breach of the dam owing to the leakage under it. It is very poor soil where the dam is built. That has to be repaired, of course, before they can have any substantial commerce through it.

Mr. DUPRÉ. On page 2632 the commerce appears to be 139,000 tons, or a little more, and 109,871 tons of that was timber and 13,379 tons were staves. Of course, the staves were probably barged. There was some piling there, too. What I was going to ask is: Referring back to the prior year, we find the tonnage amounted to over 37,000 tons, and in one place there where timber appears, page 2545, it is stated that half was barged and half rafted. It has been omitted in this place. Is this rafted or barged?

Col. NEWCOMER. I think it is both.

Mr. DUPRÉ. Why did they change the policy? Before, you gave some light on the subject, and of course it was commented upon in the House. You now leave it out entirely, and at the same time timber has increased three times as much as it was in the prior report.

Col. NEWCOMER. The tendency, I might state, is to barge more and more timber products. In other words, the lighter woods were first carried out more extensively by rafts, but now the timber is more valuable, and the tendency is to barge more and more of it. Why the discrimination between barge and rafted timber was omitted in this instance I can not say.

Mr. DUPRÉ. That is important in order to enable us to determine how it is used. If it is rafted timber, they do not need all of those locks.

Col. NEWCOMER. Certainly it would be desirable to give that.

Mr. FREAR. And yet the timber commerce increased over 200 per cent; that is, it was 30,000 tons once and now it is 109,000. That is what makes the large commerce increase, but you only discover that by looking at the items notwithstanding the increase in locks these figures show, and yet the engineers fail to show whether that is rafted or barged.

Col. NEWCOMER. This is mainly on the lower part of the stream. Of course, there is certain timber received at the mills farther up—there are a number of lumber mills along that stream—and the timber is taken a short distance to those mills.

Mr. FREAR. When it was barged the year before, the barges' haul was 73 miles to Camden—and how far is it up the Ouachita?

Col. NEWCOMER. The distance up to Camden—

Mr. FREAR. It runs 150 miles in the preceding year, and this time it is cut to about one-half. And might I ask about that, Colonel? On page 2545 of the report of 1916 practically all the commerce that is hauled has an average haul of about 150 miles. Now this last year's report cuts that down to 73 miles and less. What is the reason for that, if you know? That is less than one-half.

Col. NEWCOMER. I could not tell you. That is determined, of course, by local information.

Mr. FREAR. I was wondering if any degree of reliability could be placed upon those reports. If so, it seems to me an explanation is due.

Col. NEWCOMER. I have no doubt an explanation can be given; but the only explanation that could be given would be by the person who has collated these figures. These figures are collected from a great many different people and are simply brought together in a table by the district engineer. The details would have to be obtained from him. I do not imagine these figures are so accurate they can be relied upon completely in all instances.

Mr. FREAR. You understand what I mean: not entire confidence, no; but here are 20 items in the 1916 report, substantially 20, 16 to 20, in which the commerce is carried from 150 to 160 miles. Now, referring to this year's report, for about the same 20 items you have before you, they are carried 73 miles. Now, there is such a difference, there ought to be some explanation, because they are not using half of the river that was used before, for these same particular items. What is the reason; why is the commerce not satisfactory.

anyway? I want to know just what reliability can be placed upon a report that shows that difference.

Col. NEWCOMER. I explained yesterday, I think, or day before, that those figures are obtained by application to all of the boat lines, to receivers and shippers of freight; and the information that is collected in that way is boiled down for these tables. I have no doubt—you say there ought to be an explanation, and there certainly should be and I have no doubt an explanation can be had.

Mr. FREAR. Will you inquire and see if it can be found?

Col. NEWCOMER. Certainly. I will be very glad to make that inquiry. You will notice, of course, that there is an enormous mass of detail involved in the collection of those statistics over the country, and the details such as you are requesting can only be obtained from the local engineer.

The CHAIRMAN. And when the report is received, if there be no objection, it will be printed as a part of the hearings.

(In response to inquiry made by Col. Newcomer the following report was made:)

UNITED STATES ENGINEER OFFICE,
Vicksburg, Miss., January 23, 1918.

The CHIEF OF ENGINEERS, UNITED STATES ARMY,
Washington, D. C.

1. The traffic on Red River below Fulton, in this district, is practically all on through boats between the mouth of Black River and the head of the Atchafalaya River, La. This distance is 35 miles.

2. The reduced distance of the average haul on different items of freight as given in the annual report of 1917, was caused by the through boats from New Orleans reducing the length of their trips and stopping at Harrisonburg or the mouth of Boeuf River, La., instead of running to Monroe, La., as heretofore.

3. The tonnage of timber rafted is reported under vessel classification in the annual report for 1917, while the amount¹ reported under freight traffic includes both timber rafted and barged. These items will be separated under the heading of freight traffic in future annual reports.

T. C. THOMAS,
Assistant Engineer in Charge.

Mr. FREAR. Do you think that \$100,000 is necessary this year?

Col. NEWCOMER. That is necessary to carry forward the work on Dam No. 5.

Mr. FREAR. Will that complete the lock?

Col. NEWCOMER. No; it will not complete the lock. It provides for a year's operation.

Mr. FREAR. How much more will be required?

Col. NEWCOMER. It is my impression it will take about the same amount more the next year.

Mr. FREAR. That is, it will require \$200,000 more to complete this one lock.

Col. NEWCOMER. Yes, sir; that is my impression.

Mr. DEMPSEY. What do those two small letters mean, b. m. feet of lumber, and b. m. feet of timber?

Col. NEWCOMER. Board measure.

Mr. FREAR. Just one thing might be called attention to, there is \$441,000 on hand now, in the hands of the engineers, is there not?

Col. NEWCOMER. Yes, sir.

¹ Timber rafted, 45,104 tons; timber barged, 64,767 tons; total, 109,871 tons. (Annual report 1917, p. 2632.)

Mr. FREAR. That can be used toward the construction of this lock?

Col. NEWCOMER. Only partly—that is applicable to the other locks under construction, also. The other locks are not entirely completed.

Mr. DUPRÉ. Is not that the amount that was diverted last year?

Col. NEWCOMER. The amount that was diverted last year is included in that. It was about \$270,000, I think, that was diverted to No. 5 last year.

Mr. FREAR. And you require \$200,000 more to complete that?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Of which \$100,000 is contained here?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Then what is to be done with the balance of this four hundred and some odd thousand dollars that remains available?

Col. NEWCOMER. You will see all that given on page 1055—the details of that.

Mr. FREAR. I mean just generally; I do not care to go into it extensively.

Col. NEWCOMER. I think it would be well to look at that, if you will, on page 1055. There is a table there giving the details of the expenditure of that \$409,000.

The CHAIRMAN. Under the title of "Proposed operations."

Mr. FREAR. Yes; I see.

Col. NEWCOMER. It is similar in all other cases. We give tables of that character.

Mr. KENNEDY. Do you think the amount estimated to complete here, \$1,615,000, will be sufficient, in view of the increased costs of materials, etc.?

Col. NEWCOMER. I think it will be probably less than that.

Mr. KENNEDY. That is, if they modify the project?

Col. NEWCOMER. Yes, sir; if they modify the project; if it proves to be practicable.

Mr. FREAR. Of this \$400,000, \$56,000 appears for superintendence and inspection of work under contract.

Col. NEWCOMER. And contingencies.

Mr. FREAR. That is superintendence by whom?

Col. NEWCOMER. By the district engineer and the local force.

Mr. FREAR. Does it require that amount of money, \$56,000?

Col. NEWCOMER. That, I imagine, is largely made up of contingencies. Of course, superintendence and inspection, I would judge, would probably run in the neighborhood of eight or nine or ten thousand dollars. But we find every one of those locks and dams has had to have considerable work done upon them to provide for emergencies that arise in their construction, because the soil is so poor.

Mr. FREAR. That is only on Dam No. 2, because when we come to Lock and Dam No. 3 the superintendence, care of plant, and contingencies reaches twenty-five or twenty-six thousand more.

Col. NEWCOMER. Yes, sir. The item for contingencies for those locks and dams is very substantial, because, as I say, we have had a failure of Dam No. 4, even after doing considerable special repair work on it. The soil of the Ouachita River is extremely unfavorable for dam construction.

Mr. DUPRÉ. There is money enough to repair the dam at Monroe, is there?

Col. NEWCOMER. That is paid out of the indefinite appropriation for operating and care.

The CHAIRMAN. The next is the Little Rock, Ark., district. While there are no estimates of appropriation there, I would like to call the attention of Col. Newcomer to the Arkansas River, Ark. and Okla., for which no estimate is made. There exists a disposition or desire upon the part of one or more Representatives, who think they speak in behalf of the people contiguous to the Arkansas River, for enlarged appropriations. Will you please explain to the committee why no estimate is made, and also the reasons for the modifications of the project as heretofore recommended in House Document No. 461, Sixty-fourth Congress, first session, which recommends that the existing project be modified to provide only for snagging operations from the mouth of the river to the mouth of the Neosho, at an annual cost of \$150,000? I bring that up because I am sure questions will be asked by the committee and also on the floor of the House.

Col. NEWCOMER. We found that the experiment which Congress directed of attempting to maintain a navigable channel by the use of dredges was impracticable at any reasonable expense. Two special dredges were built for use on the Arkansas and we found substantially, as was anticipated by us in fact, that the rate of progress they could make would require such an increase in the number of dredges and such a large annual cost of operation that it would be entirely out of all proportion to any prospective commercial benefit, so that the Chief of Engineers recommended a discontinuance of that experiment. The only practicable method of getting a useful and practical channel in the Arkansas is by canalization, because the stream flow is not sufficient to give navigation during a large portion of the year.

There is now in progress, I may state, a survey of the Arkansas River, which was directed by Congress two years ago. It did not call for a preliminary examination and survey, but directed that a survey be made. That was made at the instance, I think, of Senator Clarke, and that will be reported to Congress as soon as the information is collected. But I see no substantial reason for expecting any large use of the Arkansas River for commercial purposes.

Mr. DUPRÉ. What has become of the dredges?

Col. NEWCOMER. The dredges were sent up to the Missouri River.

Mr. FREAR. Would it be well to state, so as to have the matter made of record—we have appropriated \$3,924,000 for the Arkansas and at the present time have available \$163,000, and, taking the last commerce report, on page 2664 of the last report, aside from stave bolts, logs, and the one item of riprap stone, carried 18 miles, there is only about 4,000 tons of commerce on the Arkansas River at this time.

Col. NEWCOMER. There is substantially no commerce on the river except at the lower portion, below Pine Bluff. A boat has been running to that point from the Mississippi, but the amount of business done is comparatively small and does not justify the operation of those dredges.

Mr. TAYLOR. Is this amount of "current outstanding liabilities" to be deducted from the amount available for 1916, of \$1,300,000?

Col. NEWCOMER. No, sir; the amount available is the amount remaining after deducting that from the balance unexpended.

Mr. TAYLOR. Isn't it true that the sand bars interfere with the navigability of the river and that dredging would remove that trouble?

Col. NEWCOMER. Enough of the dredging will, but it would take so many of the dredges and it would be so expensive that it would be financially impracticable to get a useful channel. Even at best, the channel they could secure would not be, probably, more than 3½ feet, because that is all we tried to get with the dredges we had. The low-water discharge of the Arkansas River is so small you would not get a real useful channel. You ought to have 5 or 6 feet as the minimum. On the Missouri the discharge is so large that although the stream itself is extremely unfavorable; like the Arkansas, in caving of banks, shifting channel, etc., we can get a practical channel, as we have enough water there to give a 6-foot channel.

Mr. TAYLOR. During low water?

Col. NEWCOMER. Yes, sir.

Mr. BOOHER. That is the Missouri River?

Col. NEWCOMER. That is the Missouri.

Mr. TAYLOR. What would it be in the Arkansas?

Col. NEWCOMER. As I say, that is not certain, because of the fact we never had enough dredges on it. As a matter of fact, I think we might get as much as 3½ feet if we had enough dredges. That is, in an open channel. By canalization you can get substantially any depth you feel necessary, but that would be an extremely expensive proposition on a stream of such characteristics, where the foundations are all of an inferior type.

Mr. FREAR. On page 1093 I notice a weekly packet service was maintained between two points by the steamboat during nine months of the year, or for a large part of nine months of the year. That is the only boat?

Col. NEWCOMER. Yes, sir.

Mr. KENNEDY. What is the reason for keeping this money in this fund? You have \$163,000 on hand, and recommend that \$35,000 be spent each year for snagging. That appropriation was made against the recommendation of the War Department, which recommended \$35,000, and Congress has now ignored their advice and appropriated \$234,000 in the bill of 1916. Why leave this \$163,000 available here: why not transfer it to some other project that needs it?

Col. NEWCOMER. That, of course, could be done if it is felt desirable; but we simply leave it here and use it as we need it. Of course, we do not draw it out of the Treasury until we do need it.

Mr. BOOHER. That is merely a matter of bookkeeping.

Col. NEWCOMER. Yes; it is simply a matter of bookkeeping. By the way, Mr. Chairman, returning to the Vicksburg district—did I cover that sufficiently on what you wanted there?

The CHAIRMAN. About the Arkansas. Yes; I think so.

Col. NEWCOMER. I neglected to call your attention to the fact that in the Vicksburg district, for the Yazoo River group, for which no estimates were submitted in the annual report, the district engineer recommends very strongly that an appropriation of \$15,000 be provided for the Yazoo River, and one of \$10,000 for the Tallahatchie and Coldwater. He states that the funds on hand now will be exhausted by the necessities of the current year, so that he feels that to take proper care of the commerce on those streams we should have

\$15,000 for the Yazoo and \$10,000 for the others. I recommend the inclusion of those estimates.

The CHAIRMAN. For the Yazoo \$15,000 and Tallahatchie and Coldwater \$10,000.

Mr. FREAR. That is for maintenance?

Col. NEWCOMER. That is for maintenance.

The CHAIRMAN. And that is the recommendation of the office of the Chief of Engineers.

Col. NEWCOMER. Yes, sir. The district engineer had originally submitted estimates thereof—\$16,000 and \$10,000—as well as several other items which we omitted entirely. But upon explaining the situation, and as a result of communications between the two offices, we came to the conclusion that these items of \$15,000 and \$10,000 should be included in the estimates.

Mr. FREAR. You have \$75,000 or \$76,000, from the amount available continuously, now on hand for the different projects.

Col. NEWCOMER. Yes, sir; for the group.

Mr. FREAR. And under the authority, which has been exercised by the engineers, you can divert any portion of that to any other of these projects.

Col. NEWCOMER. I considered that in connection with this matter, whether any of that could be diverted and, as a matter of fact, it could not. Most of that is for the Big Sunflower River—\$45,000—and most of that will be needed at that lock and dam. It is a lock and dam proposition. So I do not think it is safe to rely on that fund.

Mr. DUPRÉ. And the figures given us as available for the Yazoo and Tallahatchie, those amounts will be exhausted by the end of the fiscal year.

Col. NEWCOMER. We expect that amount to be exhausted this fiscal year.

The CHAIRMAN. We now come to the St. Louis (Mo.) district, and the first item for which an estimate is made is the Mississippi River, between the Ohio and Missouri Rivers, \$100,000 for further improvement.

We will be glad to hear from you on that estimate.

Col. NEWCOMER. That should really come under the head of maintenance, as we are now proceeding under the plan which calls only for the maintenance of existing works, with such little extensions as may be required from time to time for their maintenance. In other words, an attack begins upon a bank in such a way that it threatens the work already in existence and requires some extension of that work for its protection. It is really only on work of that character that we are undertaking further improvement. It was about two or three years ago the department approved the proposition of suspending further active prosecution of the work between St. Louis and the mouth of the Ohio, because we found that with the works already built and with the use of the dredging plant we had we could maintain the 8-foot channel, which is the project depth. Ultimately, if the commerce develops there to a sufficient extent to justify it, it will probably be desirable to go ahead with the improvement work, which contemplates fixing the channel throughout and ultimately reducing, probably, the cost of annual dredging. We are estimating now on a basis of \$350,000 a year as the amount, substantially, for

maintenance; and this \$100,000 is asked simply to make good the necessary sum for that purpose.

Mr. FREAR. It is largely expended for maintenance, you say, Colonel?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And what is the distance?

Col. NEWCOMER. It is about 200 miles.

Mr. FREAR. That is about the amount annually expended on something like 200 miles?

Col. NEWCOMER. Yes. We were, of course, expending it on a much larger scale than that a few years ago, when the cost of the project was estimated at something like \$20,000,000. You see, the estimated cost to complete is a matter of \$16,000,000, but we have now suspended work on that project.

Mr. FREAR. Are there any boats there now which require more than the 8-foot depth provided?

Col. NEWCOMER. No, sir. This is simply to maintain the 8 feet.

Mr. FREAR. Just one more question: What is the depth from St. Louis down the river to New Orleans?

Col. NEWCOMER. We maintain 8 feet to Cairo and 9 feet below that.

Mr. FREAR. That accommodates all of the packets?

Col. NEWCOMER. Substantially; yes, sir.

Mr. FREAR. What is the depth of those barges? What do they draw?

Col. NEWCOMER. On the lower Mississippi the coal barges draw as much as 8 or 8½ feet. Of course, they do not attempt to take as big barges as that up the Mississippi above Cairo, except during favorable stages of water.

Mr. FREAR. Are those barges operating on the Ohio?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. Drawing 8 feet?

Col. NEWCOMER. Yes, sir; some of them draw as much as that and some of them draw only 6 and 7 feet.

The CHAIRMAN. The next is the Rock Island, Ill., district, where there is an estimate for the Mississippi River between the Missouri River and Minneapolis, Minn., of \$500,000, for improvement, including maintenance.

Col. NEWCOMER. That item is the amount that is estimated as necessary to keep going the present parties working on the river. It is work under the 6-foot project for the upper Mississippi which was undertaken a number of years ago with the idea of being completed in 1922, I think it was. Of course, a more rapid prosecution of the work than this fund would permit would be necessary if you are going to complete it within the time Congress specified. We felt, under present war conditions, the thing to do would be to supply the funds necessary to keep the present parties at work, but not to enlarge.

Mr. FREAR. You believe that will accommodate all the commerce there is in the immediate future?

Col. NEWCOMER. Of course, this is not really so much a question of accommodating commerce as it is to provide for the operation of forces now organized for carrying on this work. We have quite an extensive Government plant and, of course, several contracting plants also, and it is very advisable to provide enough funds to keep them

at work, as the plant if of special type, quite expensive, and should be kept in use. Of course, the commerce is not extensive.

Mr. FREAR. I am not criticizing that. What I mean to say is that will be a sufficient amount to meet the demands of the commerce, in your judgment?

Col. NEWCOMER. Of course, the commerce demands a 6-foot depth, but we won't get that for some years to come.

Mr. FREAR. Does any commerce carried there demand a 6-foot depth?

Col. NEWCOMER. Oh, yes.

Mr. FREAR. What?

Col. NEWCOMER. The commerce that was started this last year—the ore and coal traffic.

Mr. FREAR. That is always what I hear about “last year”; but, Colonel, no commerce appears in the report.

Col. NEWCOMER. You understand they started some time ago a boat line?

Mr. FREAR. I understand they were considering starting a boat line.

Col. NEWCOMER. There have been lines in operation between St. Louis and St. Paul for some years?

Mr. FREAR. But these boats only take 3 or 4 feet.

Col. NEWCOMER. No; they take 4 or 5.

Mr. FREAR. I have been on the St. Paul boat, which only takes 4 feet, unless it is loaded down.

Col. NEWCOMER. That is, loaded down.

Mr. FREAR. Oh, it is never loaded down——

Mr. KENNEDY. It is only a passenger line; it only runs during the heated period of the summer.

Col. NEWCOMER. I was under the impression their boat drew 5 feet, and carried freight.

Mr. KENNEDY. That may be.

Col. NEWCOMER. This other proposition is a live proposition, in this sense—the movement of iron ore down the Mississippi from St. Paul was undertaken as an experiment this last season on one trip on barges which carried coal from Illinois up to St. Paul. The Shipping Board has allotted over \$3,000,000 for the building of 24 barges and 4 towboats for service on the upper Mississippi; and, of course, they would need for traffic of that kind a 6-foot depth.

Mr. FREAR. That is what I had in mind, Colonel. Will they need more than you are able to provide at the present time?

Col. NEWCOMER. Oh, yes, sir. But it will simply mean that until the 6-foot project is completed to that depth they will either have to discontinue the operation of the barges during certain periods or to load the barges lighter, and that is what they probably will do—carry half loads instead of full loads.

Mr. FREAR. What is the depth you have now on this part of the river?

Col. NEWCOMER. The 4½-foot project is said to have been completed, and, I think, they have substantially that depth all the time. Of course, in a stream subject to such great variations of stage, such as the Mississippi—during those changes of stages it is always changing on the bars, and there will be some periods, possibly, when there may be a less depth than that, a depth of only 3½ feet. But that is

only for a short time, and they have a number of dredges which can go to those points and dredge them out.

Mr. KENNEDY. Won't it be possible to keep the channel open?

Col. NEWCOMER. Oh, sure.

Mr. KENNEDY. And the purpose of your activities, to some extent, is to keep the channel open for the traffic.

Col. NEWCOMER. Oh, that is very true. But we can not assure a 6-foot channel.

Mr. KENNEDY. At low water.

Mr. FREAR. The barge line—only one barge there has been built and carried some coal?

Col. NEWCOMER. Oh, no. They used more—I don't know how many; they were Government barges used this last summer.

Mr. FREAR. Built for this purpose, or some of them were diverted?

Col. NEWCOMER. They were built for another purpose and leased for this work.

Mr. FREAR. What success has attended that?

Col. NEWCOMER. They were successful in getting coal up to St. Paul; but they had a very hard time in getting the ore back, largely, as I understand it, because the man in charge of it insisted on taking down too big a tow, taking all those barges in one tow, and, of course, operating in such a contracted waterway they were subject to very great delays; so that the time consumed in going down, I think, was several weeks, where it should have been several days. The experiment was not particularly successful; but it showed the practicability, of course, of getting through, and they could have gotten through with less loss of time and money, probably, if they had simply accommodated themselves to the unfavorable condition of the channel.

Mr. KENNEDY. They loaded a full cargo.

Col. NEWCOMER. Yes. They sent actually more ore than was ordered; they sent additional ore, and the consequence was they loaded the barges more heavily than even Mr. Goltra had intended they should do.

Mr. FREAR. Are those barges intended to be leased to ore lines or coal lines?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. I asked the other day, Colonel—I do not know whether you have examined into it since—why the engineers placed in the commerce report of 1913 automobiles valued at \$9,000,000 and then left them out in 1914 and 1915, and again last year put them in \$41,000,000. Did you make any inquiry on that? This was in relation to ferryage across the upper Mississippi River.

Col. NEWCOMER. I have already written to the district engineer at Rock Island and told him to let us know which items in that list were ferry items that should be segregated from the others in the record, and also indicating the opinion that the teams and automobiles which were carrying passengers or commodities should not themselves be included as a part of the commerce.

The CHAIRMAN. We now come to the St. Paul, Minn., district. There is a group of items there. The first one is the Mississippi River between St. Paul and Minneapolis, in which an estimate of \$80,000 is submitted for further improvement; and in the same

group the reservoirs at the head of the Mississippi River, for which there is an estimate of \$32,000 for further improvement.

Mr. SWITZER. Isn't that a power-development proposition there?

Col. NEWCOMER. That item of \$80,000 is required substantially on account of the necessity of obtaining flowage rights for what is called the Twin City Lock and Dam between St. Paul and Minneapolis. That dam is now built, and there remains a small amount of work on it to complete it for the foundation of the dam. The estimated cost of the flowage rights is \$85,000. We have some funds on hand; so that the amount estimated as the additional sum required is \$80,000.

Mr. FREAR. When we made the appropriation of something like \$250,000 a year or so ago, that was expected to complete the work there, was it not? It was expected it would complete the work and, possibly, acquire the flowage rights, wasn't it?

Col. NEWCOMER. It was expected to complete the work there and possibly acquire the flowage rights.

Mr. FREAR. Those flowage rights had not been acquired before?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And they are needed to complete the project?

Col. NEWCOMER. This is needed in order to satisfy the obligations of the Government. They are, of course, in connection with the construction of that dam. That matter has been under discussion for quite a while. Part of the land rights have been settled by transfer to the city of land belonging to the Government at the abandoned lock and dam site, in exchange for city land submerged; but, in order to clear up the situation, it is expected we will have to pay about \$85,000 to acquire the rest of the flowage rights needed.

Mr. FREAR. There is no commerce up there now?

Col. NEWCOMER. Substantially nothing has developed yet.

Mr. FREAR. Is anyone using that water power for any purpose?

Col. NEWCOMER. No, sir; the water power has not been developed yet. The power house substructure is in, but no machinery is in for generating power and Congress has not indicated what disposition will be made of that.

Mr. FREAR. Who owns the power house?

Col. NEWCOMER. The Government.

Mr. FREAR. The Government is building the power plant?

Col. NEWCOMER. The Government has built the power house substructure: that is, the essential part which forms part of the dam, so to speak. The substructure of the power house is one element in the dam, and that has been built so that the machinery can be installed and the power plant completed whenever it is decided to go ahead with the development of power.

Mr. FREAR. Have you done that in any other case, Colonel?

Col. NEWCOMER. That is the only case I know of where the Government has made provision for the substructure of the power house.

Mr. FREAR. I remember the Engineer's report formerly said this was expected to develop some passenger business. Of course, there has never been any passenger business so far as the reports show.

Col. NEWCOMER. Of course Minneapolis has been interested in this proposition. They have gone to some expense to build a terminal at Minneapolis and those people are very much interested in this move-

ment to build a barge line for service on the upper Mississippi. They claim a good deal of their products will be sent down the Mississippi through this lock and dam.

The CHAIRMAN. Colonel, it appears that legislation by Congress will be necessary before this water power is utilized. Has the department made any recommendation as to the character of legislation?

Col. NEWCOMER. No, sir; they have not been asked to.

Mr. KENNEDY. Has there not been some offer made there on the part of the Twin Cities to utilize this power?

Col. NEWCOMER. There was some offer made on the part of the Twin Cities. That use by the cities of the power there would probably be the logical outcome of the situation. I think they have contemplated that, but no definite steps were taken by Congress to permit that or to make any arrangement for it.

Mr. KENNEDY. But haven't the Twin Cities made a proposition to the Government officially?

Col. NEWCOMER. I think there was a proposition made at the time of the change from the low dam to a high dam.

Mr. KENNEDY. That is my understanding, but no action was taken on that by Congress.

Col. NEWCOMER. I think they made the proposition then which looked to the immediate utilization of the power as soon as the dam would permit it; but Congress (I suppose on account of the unsettled condition generally of the dam question) refused to act on it.

Mr. FREAR. What was the idea of the Government putting money into the river at that point for power purposes, when it had never done it elsewhere? Was it brought about by legislative pressure on the engineers or by the engineers recommending this themselves?

Col. NEWCOMER. I think it was brought about by local agitation. They noticed there was this source of power which, of course, is made much more effective by building one high dam than by building two low dams. The low dams are apt to be drowned out at the freshet stages.

Mr. FREAR. You have two dams there?

Col. NEWCOMER. The existing power plants are all higher up at the falls, and of course they develop power there; but this afforded another opportunity for power, and they thought it ought to be planned so as to permit power development as well as navigation: and that appeal to Congress was effective.

Mr. DEMPSEY. How much power will be developed, Colonel?

Col. NEWCOMER. It is my impression somewhere in the neighborhood of 25,000 horsepower.

The CHAIRMAN. It is stated here in the annual report, "The improvement will also make possible the generation of 15,200 horsepower of electricity. Nothing can be done in this connection, however, until further action is taken by Congress."

Mr. FREAR. We permitted the Keokuk Dam people to acquire power on the Mississippi, and they have constructed a dam and run it independently. There has been a different policy pursued in the one case than in the other, and it is a very important proposition because it is establishing a precedent. In the one case the Government establishes the dam, and in the other case they give the Keokuk

power people the right to build. What is the reason for the distinction in that policy?

Col. NEWCOMER. The navigation interests at Keokuk were already accommodated by the river improvement. There it was simply a question of getting power, the Government needs for navigation being sufficiently met, and as a result of that situation the power people had to provide the money for the dam. The city of Minneapolis needed the dam for navigation interests, and it desired to get the power developed if the dam was built.

The CHAIRMAN. Incidental to navigation?

Col. NEWCOMER. Yes; of course it was adopted primarily for navigation, and then it was afterwards modified so as to permit a more favorable development of power.

✓ The same thing occurred on the Black Warrior River. You remember Dam No. 17 there was a high dam, taking the place of lower dams which were first planned simply as a navigation feature. In that case also the Government incurred the additional expense, which was considerable, of conserving that power situation. X

Mr. FREAR. For the benefit of such parties who chose to lease?

Col. NEWCOMER. It was expected to be for the benefit of the Government also.

Mr. FREAR. Who is that leased to?

Col. NEWCOMER. Nobody yet. It is in the same situation as at St. Paul.

Mr. FREAR. Of course there is no commerce on the Mississippi between St. Paul and Minneapolis?

Col. NEWCOMER. Not yet.

Mr. FREAR. And the river has been in existence since the age of man.

Col. NEWCOMER. Oh, no; the dam has just been completed.

Mr. FREAR. I understand; but there has never been any commerce there. In fact, there is little commerce from St. Paul down the river, or practically very little. I think 14 miles was the average haul on the upper Mississippi last year, between terminals.

Mr. KENNEDY. You were speaking about the Keokuk project being for power alone. I think you are in error about that.

Col. NEWCOMER. This power proposition has given increased commercial facilities also.

Mr. KENNEDY. The improvement to navigation was the reason, I think, on which the engineers gave their favorable report. It has proven to be a very great aid to navigation and has provided an increased depth of water for some 65 miles above the dam. And by building this dam in the river there has been a saving to the Government of about two million dollars.

Col. NEWCOMER. It undoubtedly has improved the navigation situation by that. Moreover, there was a company above that point on the river that undertook to build some big boats, and the locks at Keokuk were enlarged materially, after the plans were first made for the power plant, because the people claimed they ought to have bigger locks in order to get these boats out, and make adequate provision for the future.

Mr. SWITZER. There is a dam below Chattanooga, put in by private parties?

ment to build a barge line for service on the upper Mississippi claim a good deal of their products will be sent down the river through this lock and dam.

The CHAIRMAN. Colonel, it appears that legislation will be necessary before this water power is utilized. I am sure the Department made any recommendation as to the character of the legislation?

Col. NEWCOMER. No, sir; they have not been asked to.

Mr. KENNEDY. Has there not been some offer made to the part of the Twin Cities to utilize this power?

Col. NEWCOMER. There was some offer made on the part of the Twin Cities. That use by the cities of the power there would probably be the logical outcome of the situation. I think they contemplated that, but no definite steps were taken by Congress to commit that or to make any arrangement for it.

Mr. KENNEDY. But haven't the Twin Cities made a proposition to the Government officially?

Col. NEWCOMER. I think there was a proposition made in regard to the change from the low dam to a high dam.

Mr. KENNEDY. That is my understanding, but no action has been taken on that by Congress.

Col. NEWCOMER. I think they made the proposition that they looked to the immediate utilization of the power as soon as Congress would permit it; but Congress (I suppose on account of the condition generally of the dam question) refused to act on it.

Mr. FREAR. What was the idea of the Government putting into the river at that point for power purposes, when it could be done it elsewhere? Was it brought about by legislative action of the engineers or by the engineers recommending this thing?

Col. NEWCOMER. I think it was brought about by local action. They noticed there was this source of power which, of course, would be much more effective by building one high dam than by building low dams. The low dams are apt to be drowned out at high stages.

Mr. FREAR. You have two dams there?

Col. NEWCOMER. The existing power plants are all higher up the river, and of course they develop power there; but this is another opportunity for power, and they thought it ought to be planned so as to permit power development as well as navigation; and that appeal to Congress was effective.

Mr. DEMPSEY. How much power will be developed, Colonel?

Col. NEWCOMER. It is my impression somewhere in the neighborhood of 25,000 horsepower.

The CHAIRMAN. It is stated here in the annual report, "The improvement will also make possible the generation of 15,200 horsepower of electricity. Nothing can be done in this connection, however, until further action is taken by Congress."

Mr. FREAR. We permitted the Keokuk Dam people to acquire power on the Mississippi, and they have constructed a dam and run it independently. There has been a different policy pursued in the one case than in the other, and it is a very important proposition because it is establishing a precedent. In the one case the Government establishes the dam, and in the other case they give the Keokuk

people the right to build. What is the reason for the distinct policy?

NEWCOMER. The navigation interests at Keokuk were already protected by the river improvement. There it was simply a question of getting power, the Government needs for navigation efficiently met, and as a result of that situation the power had to provide the money for the dam. The city of Minneapolis needed the dam for navigation interests, and it desired to get it developed if the dam was built.

CHAIRMAN. Incidental to navigation?

NEWCOMER. Yes; of course it was adopted primarily for navigation and then it was afterwards modified so as to permit a more complete development of power.

THE SAME THING OCCURRED ON THE BLACK WARRIOR RIVER. YOU RE-
DAM NO. 17 THERE WAS A HIGH DAM, TAKING THE PLACE OF LOWER
DAMS WHICH WERE FIRST PLANNED SIMPLY AS A NAVIGATION FEATURE. IN
ADDITION ALSO THE GOVERNMENT INCURRED THE ADDITIONAL EXPENSE,
AS CONSIDERABLE, OF CONSERVING THAT POWER SITUATION.

REAR. For the benefit of such parties who chose to lease?

NEWCOMER. It was expected to be for the benefit of the Government also.

REAR. Who is that leased to?

NEWCOMER. Nobody yet. It is in the same situation as at St. Louis.

REAR. Of course there is no commerce on the Mississippi between St. Paul and Minneapolis?

NEWCOMER. Not yet.

REAR. And the river has been in existence since the age of man?

NEWCOMER. Oh, no; the dam has just been completed.

REAR. I understand; but there has never been any commerce on the river. In fact, there is little commerce from St. Paul down the river practically very little. I think 14 miles was the average between the upper Mississippi last year, between terminals.

KENNEDY. You were speaking about the Keokuk project being developed alone. I think you are in error about that.

COL. NEWCOMER. This power proposition has given increased commercial facilities also.

MR. KENNEDY. The improvement to navigation was the reason, I think, on which the engineers gave their favorable report. It has proven to be a very great aid to navigation and has provided an increased depth of water for some 65 miles above the dam. And by building this dam in the river there has been a saving to the Government of about two million dollars.

COL. NEWCOMER. It undoubtedly has improved the navigation situation by that. Moreover, there was a company above that point on the river that undertook to build some big boats, and the locks at Keokuk were enlarged materially, after the plans were first made for the power plant, because the people claimed they ought to have bigger locks in order to get these boats out, and make adequate provision for the future.

MR. SWITZER. There is a dam below Chattanooga, put in by private parties?

Col. NEWCOMER. Oh, yes.

Mr. SWITZER. And of course the development of power naturally improves navigation, and there is water up the river for 30 or 40 miles?

Col. NEWCOMER. It is a very substantial improvement to navigation.

Mr. SWITZER. That is one of the highest lift locks. It is between 40 and 50 feet, and it cost those people about \$10,000,000. I understand it cost \$10,000,000 to build that dam.

Mr. FREAR. They put it in at their own expense?

Mr. SWITZER. They put in \$2,500,000. The company started and got Brady in and then the company broke up and Brady went on and spent \$10,000,000. And it is completed and making 40,000 or 50,000 horsepower. It has a big horsepower, but it won't pay only on about a two or three million dollar investment.

The CHAIRMAN. Colonel, you have not made any comment on the item for reservoirs at the headwaters of the Mississippi, \$32,000 for further improvement.

Col. NEWCOMER. That item is also for acquiring flowage rights, in this case at the Sandy Lake Reservoir. We find that the operations of the reservoir have affected property over which we had not acquired flowage rights, and this sum is estimated as necessary to purchase those flowage rights.

The CHAIRMAN. Why are no estimates made on the Mississippi River between Brainard and Grand Rapids and for Mississippi and Leach Rivers?

Col. NEWCOMER. Because we have sufficient funds on hand.

The CHAIRMAN. The next item is Warroad Harbor and Warroad River, Minn., \$4,000 for maintenance.

Col. NEWCOMER. That amount is required in order to restore the project depth and make some repairs to the jetties I think they have there. In addition to repairing the plant that is used for those two isolated works, one at Warroad Harbor and the other at Zippel Bay, Lake of the Woods, these two items, four thousand and two thousand, making a total of \$6,000, are required to restore the project depths at these points. The commerce, you will notice, is not at all heavy at those places, but they are absolutely dependent upon those harbors for taking care of the boats.

Mr. FREAR. Doesn't that enter into Lake Superior?

Col. NEWCOMER. No; it is Lake of the Woods. There are a great many boats on the Lake of the Woods and these are the harbors at which they are accommodated.

Mr. FREAR. It is a very small commerce?

Col. NEWCOMER. A very small commerce.

The CHAIRMAN. I have just had a piece of information that brings regret to me and I am sure will to the committee. Mr. Kettner has accepted a position on the Committee on Naval Affairs, and is going to tender his resignation as a member of this committee. Personally, I regret the severance of his relations with the committee very much. He was always agreeable and pleasant and has certainly always been most active and unselfish in his service on the committee.

Mr. OSBORNE. I especially want to protest against Mr. Kettner's going. I feel I shall be very lonely, from California, without his

presence. And I am particularly concerned, having for 40 years lived out there in the sunny climate of California, and never having spent a winter in all that time in the East, about spending so much time, as I do, in this cold room. I feel his withdrawing will very appreciably lower the temperature. His genial smile is always a source of comfort and pleasure.

Mr. DUPRÉ. You mean "warmth," too.

Mr. OSBORNE. Yes. And I desire to express my great regret that he is going to leave this committee; although I am sure he will do fine service wherever he is placed.

Mr. FREAR. I suggest that be put in print and that we all sign it as expressing the views of the committee.

Mr. KETTNER. Mr. Chairman, I want to assure you, and the committee, that it is with deep regret that I am leaving this committee. The chairman, the committee, and every member of the Corps of Engineers have been extremely kind to me, and my associations have been very, very, pleasant. But, as the chairman stated, my people have requested me to become a member, if possible, of the Committee on Naval Affairs, as there is but one member west of the Rockies from the State of Oregon on that committee, and they thought it only right and proper that the great State of California should be represented on the Naval Affairs Committee. I thought it my duty to comply with their request, but I want to assure you again that it is with deep regret that I tender my resignation.

Mr. FREAR. You understand, then, you have been drafted.

Mr. KETTNER. More or less; yes.

(The committee thereupon adjourned until Friday, January 11, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Friday, January 11, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. I will read to the committee letter of G. K. Little, special disbursing officer, United States engineer office, Mobile, Ala.; also letter of Mr. F. H. Davis, president Pascagoula Commercial Club, to Mr. Little (reading):

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Mobile, Ala., January 2, 1918.

HON. JOHN H. SMALL,
*Chairman River and Harbor Committee,
House of Representatives, Washington, D. C.*

DEAR SIR: Referring to inquiries made by you as to proposed terminal facilities in this section of the country during your recent visit to Mobile and also your remarks on the same subject when I met you about a month ago in the office of the Chief of Engineers, there is inclosed herewith copy of a letter just received from the Pascagoula Commercial Club in regard to the action taken by that city. As this action on the part of the citizens of Pascagoula is believed to have been caused, or at least hastened, by your letter of October 5, it is thought that you would be interested to know of this matter.

Yours, very truly,

G. K. LITTLE,
Special Disbursing Agent.

PASCAGOULA, MISS., December 29, 1917.

Mr. G. K. LITTLE.

*Special Disbursing Agent,
United States Engineers Office, Mobile, Ala.*

DEAR SIR: We beg to acknowledge receipt of your letter dated November 8, 1917, calling our attention to the letter of Hon. John H. Small, chairman of the Rivers and Harbors Committee, of date October 5, and the letter of the Secretary of War, dated October 6, 1917, copies of which were attached to your letter, in reference to providing terminal facilities at the various ports of the United States, transportation facilities, etc.

We are pleased to advise you that the port of Pascagoula has taken prompt action in this matter, and the city will at once issue \$40,000 in bonds for the acquiring of river frontage and construction of docks and warehouses at a convenient point for the public in the handling of both rail and water freights. These docks will be connected with the several railroads here, and we believe that within 12 months or less the work outlined will be completed and ready for use.

The contemplated development will include 1,000 feet of river frontage, with the necessary covered sheds for the storing of freight; in addition to this development the city owns in fee simple practically 2,000 feet of other river frontage, which can and will be developed as the needs of commerce will require.

We beg to add our indorsement to the suggestion of Chairman Small and Secretary Baker in this matter, and believe that it will add greatly to the handling of freights and developments of the seaports of the country besides reduction in freight rates.

Very truly, yours,

PASCAGOULA COMMERCIAL CLUB.
By F. H. LEWIS, *President*.

The CHAIRMAN. We will begin this morning with the Kansas City (Mo.) district, page 33, of the committee book, at the top of the page. The first item for which estimate of appropriation is made is the Missouri River from Kansas City to the mouth, \$100,000 for maintenance, and \$400,000 for further improvements. Colonel, we will be glad to hear from you on that item.

**STATEMENT OF COL. H. C. NEWCOMER, ASSISTANT TO THE CHIEF
OF ENGINEERS, WAR DEPARTMENT—Resumed.**

Col. NEWCOMER. The situation on the Missouri River between Kansas City and the mouth, with reference to the expenditure of available funds and those estimated, is set forth at considerable length on pages 1172 and 1173 of the annual report. You may wish to refer to that for further details. In brief, this amount, \$500,000, is the amount that we consider essential to keep the working parties on the river at work until the appropriation afforded by the next bill becomes available. We have now a very substantial amount on hand. We need the \$100,000 for maintenance for the operation of the dredges, which were transferred to this river from the Arkansas. We find that those dredges were very successful in the past year in keeping the channel open, so that the boat line operating between Kansas City and St. Louis could continue operation throughout the season. This is the first time they have been able to do that. They have been usually stopped by low water.

The \$400,000 for further improvement is the amount required to keep the operating plants on the river busy until the next session of Congress provides more funds.

Mr. DUPRÉ. Is that the stretch of the Missouri River which those men who appeared here with Mr. Borland the other day had in mind?

The CHAIRMAN. Yes.

Mr. FREAR. In this connection, on page 1172, it shows the total amount that is estimated necessary to carry on the work to be \$1,699,708 for the coming year.

Col. NEWCOMER. No, sir; that is just the funds that were unexpended on July 1.

Mr. FREAR. Yes; but what is in this statement \$1,699,000; is not that what you propose to do now, or is that what has been accomplished?

Col. NEWCOMER. That is what we propose doing with the funds available July 1; and then the next statement gives you the application of the funds appropriated by the act of August 8, 1917.

Mr. FREAR. Then, referring back to page 1172, out of this \$1,699,708 for improving the lower Missouri River, \$629,318 is for revetments; that is, to prevent the washing of the banks; that is, practically for reclamation?

Col. NEWCOMER. That is a part of the revetment only; that is the part that is done by contract.

Mr. FREAR. Then comes the next item, \$246,000 for standard revetment again. This \$364,000 is in addition to the other items for revetment, and the only amount for dredging in that whole statement—of \$1,699,708 required for the Missouri River—is \$75,000 for dredging and \$15,000 for repair of dredging boat; is not that right?

Col. NEWCOMER. That is right.

Mr. FREAR. Only \$90,000 for dredging and all the rest of the \$1,600,000 is for revetment and protection of land?

Col. NEWCOMER. You are mistaken when you say "Protection of the land." That is for the protection of the channel. The method of improvement on the Missouri River—

Mr. FREAR (interposing). Has not "Protection of the land" any connection with this?

Col. NEWCOMER. Holding the river in a fixed position will protect the land from erosion, and in that way a great incidental benefit accrues to the land, but it is essential as a method of improvement; we can not improve that channel unless we hold it in one position.

Mr. FREAR. One of the engineers' reports stated there were 500,000 acres of land to be reclaimed under this proposition—this improvement of the lower Missouri River. I suppose you are familiar with that statement.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. That is true, is it not?

Col. NEWCOMER. Essentially; yes, sir.

Mr. FREAR. That is true in that case, and on page 1173 the expenditure next year for revetment and diking, is in the same proportion as the last given or practically so. I notice the next item, the Missouri River from Kansas City to Sioux City, has this memorandum opposite it:

"Of this amount \$227,000 was contributed by local interests;" in addition, so many thousand dollars by other interests. That is for a small expenditure on the river between Kansas City, Mo., and Sioux City.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. If a contribution of \$227,000 was exacted there, why was not the same contribution exacted on this lower branch of the

river, when we are expending all this money for reclamation of land?

Col. NEWCOMER. I think that cooperation on the part of local interests would certainly be justified between Kansas City and the mouth also, but the situation is far different above Kansas City. Above Kansas City a work was undertaken, not substantially for the improvement of the channel but simply to protect the property, and in that case, of course, the condition was attached that the property owners must contribute to it. Here, below Kansas City we are engaged in a very large, extensive, project for the improvement of the channel. The revetment of the banks is an essential element in holding the channel, not only revetment, but also the dikes, which are built. Of course, both of those tend to hold the banks, and in that way protect the land. It was also proposed by the local interests that the Government should build levees, but that we are not doing. The levees are also needed and are being built by local interests. The Government is not contributing to that. I think it would be very proper on their part to contribute to this holding the channel, but to what extent you could require that would have to be investigated.

Mr. FREAR. This is the lower project, and the one that Col. Deakyne reported for abandonment.

Col. NEWCOMER. Yes, sir.

Mr. FREAR. And also Col. Townsend, president of the Mississippi River Commission, reported against the lower project?

Col. NEWCOMER. That is right.

Mr. FREAR. But they were overruled by the present Chief of Engineers.

Col. NEWCOMER. By the River and Harbor Board and also the Chief of Engineers and Congress.

Mr. FREAR. Where is Col. Deakyne?

Col. NEWCOMER. He is commanding one of the regiments in France.

Mr. FREAR. And Col. Townsend?

Col. NEWCOMER. He is in France also.

The CHAIRMAN. Colonel, it might be well for you to describe briefly the method of improving the channel on the Missouri River from Kansas City to the mouth.

Col. NEWCOMER. The method of improvement consists in fixing the channel by the construction of bank revetment to hold caving banks, and of dikes to contract the waterway where it is too wide. The river is taken up in sections, depending upon the local physical conditions. There are portions of the river that have what we call "bluff contact," that is, where the river flows along high land, where the shore is practically stable, permanent, and not subject to erosion. We take such a place as a point of departure and then try to hold the channel going downstream until we get to the next bluff contact. Of course, the river changes very rapidly where it is not controlled, and sometimes we have to wait for changes that are in progress and let them proceed to a certain extent before the river is in proper shape to hold. All those things are taken into consideration, of course, in expending the money from year to year. We have had great pressure applied to us on the Missouri River to step aside from this systematic method of procedure and take up

isolated bits of work. Of course, it is impossible to obtain permanent improvement if you proceed in that way. It is only where those isolated points assume special importance threatening cut-offs or something of that kind that we go to them. The work is proceeding on a very satisfactory line, so far as the engineering proposition is concerned. We are making good progress and we expect to be able to hold the river at very heavy cost, it is true, and whether the commercial outcome of that is successful remains to be seen, of course.

Mr. SWITZER. But you say revetment work is one of the essential things to be done in order to secure a permanent channel?

Col. NEWCOMER. On the Missouri River that is essential. There the river changes so rapidly.

Mr. SWITZER. You always consider that one of the things that has to be done?

Col. NEWCOMER. That has to be done.

Mr. FREAR. Is there any other river in the country where nine-tenths of the appropriation annually is for revetment?

Col. NEWCOMER. No, sir; there is no other.

Mr. KENNEDY. About what per cent of the banks have to be revetted to hold the banks.

Col. NEWCOMER. I think it is figured substantially that practically one bank or the other throughout the whole length of the stream, and possibly a little more than the length of the stream, would be represented, because in some places they overlap.

Mr. KENNEDY. What has been the condition of commerce during the last year; has it increased?

Col. NEWCOMER. I do not think it has increased to any notable extent. The operations of the dredging fleet has enabled the line to operate throughout the season, but I do not think that the figures for commerce are given. On page 1174—but that you see only gives the aggregate, including the amount of sand and gravel and things like that—you will have to go to the second volume to get the details.

Mr. FREAR. I have examined that myself, and, to be frank, it has been decreased about one-half, after deducting sand and gravel hauled 1 mile.

Col. NEWCOMER. I have not examined it.

Mr. FREAR. What I ask is, during the past year has the boat line been maintained?

Col. NEWCOMER. One moment, Mr. Frear. These statistics that are given in here are for the calendar year 1916. The dredge boats only operated during the calendar year 1917. In other words, the statistics for the year just past are not in this volume.

Mr. FREAR. Two years ago we were assured—this boat line had been established before that—that there would be a rapid increase in the commerce on the river. There has been a decrease during the past year.

Col. NEWCOMER. There was a very considerable period during 1916 when the boats could not operate, and that is really the reason why we transferred the dredges up there.

Mr. FREAR. Give us the necessity for dredging.

Col. NEWCOMER. In other words, to facilitate traffic, as a temporary expedient, while the permanent works are being built. We thought

it was proper to operate the dredges there so as to enable the existing traffic to be carried on and to grow as they claimed it would, if we simply gave them a continuous channel.

Mr. FREAR. The fault was with the channel?

Col. NEWCOMER. In 1916 it was.

Mr. FREAR. The amount necessary to complete this lower project, in order to test the value of the lower Missouri River, will be in addition to the \$13,000,000 already spent, an additional amount of \$11,600,000.

Col. NEWCOMER. That is right.

Mr. FREAR. That will be a total of about \$25,000,000?

Col. NEWCOMER. That is the amount estimated to complete this 6-foot channel. Of course, before we reach that point, there ought to be some indications of the commercial value.

Mr. DUPRÉ. Just for my information, how far above St. Louis does the Missouri River flow into the Mississippi?

Col. NEWCOMER. It is 17.5 miles from the Eads Bridge at St. Louis to the mouth of the Missouri River.

Mr. DUPRÉ. What is the name of the place?

Mr. BOOHER. Near Alton, Ill.

Mr. OSBORNE. With reference to this 500,000 acres, do you know what the character of that land is?

Col. NEWCOMER. It is very fertile bottom land.

Mr. OSBORNE. Will its value be more or less affected by the building of these revetments?

Col. NEWCOMER. Undoubtedly.

Mr. OSBORNE. Have they contributed anything at all to the fund?

Col. NEWCOMER. They have not.

Mr. FREAR. How is it with respect to this lower river as compared with the Mississippi River?

Col. NEWCOMER. On the lower Mississippi they have not contributed to the revetment work except in a very small way. On the lower Mississippi River the contribution has been to the levees, and here on the Missouri they are building the levees totally by themselves.

Mr. BOOHER. Did you not hold an investigation in Kansas City for several days to see whether it would be a good idea to ask for contributions; do you not remember that?

Col. NEWCOMER. I think the question of local cooperation was considered there.

Mr. BOOHER. Yes.

Col. NEWCOMER. I was not present at that hearing.

Mr. BOOHER. I do not remember your being there. And was it not determined by the engineers that they would report against the Government building any levees on the Missouri River, that people should build their own levees and the Government would build the channel?

Col. NEWCOMER. That was the conclusion reached. It was considered impractical on account of the scattered position of these lands to arrange for any local cooperation. In other words, there were so many different tracts or plots here and there, so there would be considerable practical difficulty in securing a local contribution and the amount of that would probably be no considerable per cent anyhow of the total.

Mr. SWITZER. Haven't they built any levees?

Col. NEWCOMER. Yes, sir.

Mr. DUPRÉ. Is that land subject to overflows?

Mr. BOOHER. It gets 30 or 40 feet under water.

Mr. FREAR. It has been suggested by a prominent waterway man of the country that during the overflow of the Missouri River, the waters could be used and diverted down to irrigate the land of northern Texas, which has been subject to drought for some time past. What is your judgment about that?

Col. NEWCOMER. I think that is entirely impracticable.

Mr. FREAR. That comes from a man who is considered one of the strongest men in the river-publicity work to-day.

Mr. KENNEDY. How would you carry the water down?

Mr. FREAR. I suppose he meant by dikes or something of that kind.

Mr. BOOHER. The report of the hearing at Kansas City has been published as a public document, has it not, Colonel?

Col. NEWCOMER. Yes, sir.

Mr. BOOHER. I forget the name of it, but you can find it by inquiring at the Congressional Library. The hearing was published in book form.

Mr. FREAR. I have that and have read it several times, and also the brief in connection with it.

Mr. OSBORNE. This 500,000 acres of land seems to me to be a very large lot of land. It is about as much land as there is under irrigation in Southern California, excluding the Imperial Valley. We have the whole southern part of the State under irrigation and we produce \$100,000,000 worth of produce there, or more than that. Even if this land is somewhat scattered, it seems to me it must cover considerable territory. That is an immense area of land, and I want to ask you what, in its present condition, is the probable value?

Mr. BOOHER. When you can get any sale for that bottom land at all it usually brings \$25 to \$40 an acre.

Mr. OSBORNE. What would it be worth if protected?

Mr. BOOHER. If the river bank was protected from washing and erosion, it would be worth \$100 an acre.

Mr. KENNEDY. It would have to be tiled and ditched?

Mr. BOOHER. Yes; it would have to be tiled, and on the upper Missouri River the farmers are reclaiming and building up their land, but they are making no levees, because the water washes the levees away, by the erosion of the banks, and they do not build levees any more.

Mr. OSBORNE. Is there any distinction in practical results so far as protection goes between revetments and levees?

Col. NEWCOMER. The revetment simply holds the natural bank. Of course, it does not affect the question of overflow at all. The levee on the other hand is an embankment thrown up to exclude flood waters from the land.

Mr. OSBORNE. The revetments do not do any good?

Col. NEWCOMER. Except to prevent the land from being washed into the river; that is going on very extensively, in many places.

Mr. FREAR. When the Government puts in a revetment, how long does it last, that particular revetment?

Col. NEWCOMER. That is a very indefinite proposition.

Mr. FREAR. Well, I should say, on the average?

Col. NEWCOMER. I think they figure that the revetment work will require on the average about two per cent annually for repairs.

Mr. FREAR. Will that be sufficient to maintain it?

Col. NEWCOMER. They expect it to be sufficient. A great deal of the revetment, of course, becomes covered up by the accumulation of the deposits, and it practically would remain there indefinitely. It depends upon the local changes in the river. If there are any marked changes, so that the attack may be brought directly against the revetment, then, of course, you may expect trouble and repairs.

Mr. FREAR. Does not that occur rather frequently?

Col. NEWCOMER. It does still occur rather frequently, because the river is so largely uncontrolled. But as you continue the revetment and get it more completely under control, we expect to minimize that very much.

Mr. FREAR. That condition of the river like the Missouri River occasions attacks of the stream upon the revetment?

Col. NEWCOMER. You will always have considerable expense for maintenance. That is one of the points Col. Deakyne brought up.

Mr. FREAR. The maintenance of revetments?

Col. NEWCOMER. Yes.

Mr. FREAR. Speaking about the 500,000 acres to be reclaimed, there are 20,000,000 acres, in general figures, along the lower Mississippi. Of course, there a contribution of one-third is made.

Mr. BOOHER. The contribution of the lower Mississippi does not go to revetment work?

Col. NEWCOMER. Very seldom. There has been this year a contribution to one piece of revetment work that was considered essential to hold a part of the line of levees in the upper Yazoo River district. The commission had allotted all of its funds to other urgent work and the levee district supplied the balance required for this particular piece of revetment. That very seldom occurs.

Mr. BOOHER. I know, in all our investigations and hearings on the lower Mississippi River, the amount contributed by the people has always been to the levee work and nothing for revetment. On the Missouri River, from Kansas City down, there is this difference: The Government does not do any of the levee work at all, and so the commission decided to leave the levees up to the people. They are building the levees and keeping right up with the improvements of the river, and nobody could be heard to say revetment work does not protect at all. It does protect it.

The CHAIRMAN. It prevents erosion and caving in.

Mr. BOOHER. I have always taken the position that it is the duty of the Government to take care of that land along the river or else declare the river nonnavigable and let the people have it, one or the other. If I had the money to do these things, I would be very glad to have control of the river.

Mr. FREAR. One other question—it may not be pertinent. The revetment on the Mississippi River is undertaken by the Government. Does this contribution of one-third made under the flood-control bill also bear on the revetment?

Col. NEWCOMER. No, sir; to the levee construction.

Mr. FREAR. But does the Government undertake all the revetment on the lower Mississippi?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What is the estimated cost of putting in that revetment along the lower Mississippi, do you remember?

Col. NEWCOMER. The entire fixation of the channel on the lower Mississippi is a very big proposition. I think it is estimated at something like \$90,000,000 or \$100,000,000.

Mr. FREAR. \$225,000,000 was the figure, was it not, in the reports by the engineer for revetment?

Col. NEWCOMER. I do not recall that.

Mr. FREAR. Maybe that includes the levee.

Col. NEWCOMER. I think, Mr. Frear, that must have been for the 14-foot project—something like that.

Mr. FREAR. I think it came about by improving with revetments.

Col. NEWCOMER. That is a very expensive proposition, and I do not understand the Government has embarked on that as yet. We are only building the revetment that is required for protection of some harbor front, a town, or some important levee line, or to prevent a cut-off.

Mr. FREAR. One quarter is to be set aside for revetment work. Is not that about the proportion?

Mr. KENNEDY. It costs more to build the revetment on the lower Mississippi on account of the water being so deep.

Col. NEWCOMER. Oh, yes; the revetment on the Mississippi costs between \$30 and \$40 a linear foot of bank, while on the Missouri it costs about \$12 or \$15.

Mr. BOOHER. Just about one-third as much?

Col. NEWCOMER. Just about one-third as much. Some of it is less than \$12—\$10 or \$12.

Mr. BOOHER. You asked me how long this revetment work lasted. I think the first revetment work was done opposite St. Joe, on the Kansas side, and to my knowledge it has been there 40 years, and it has had very little repairs. Immense trees have grown up through it and formed a new bank. Sometimes it is covered for miles in length and very deep with sediment that is always deposited when we have an overflow, and I do not see how it can ever wash that out after it is covered unless the river cuts in behind.

Mr. FREAR. I have discussed with men who have been not only up the Missouri River to investigate but men engaged with bridge construction for railways across the Missouri River, and they say this—and the Colonel can correct me if it is a wrong statement—that the river undermines the piling in places and sometimes goes down to a very great depth, throwing the piling out of the river and also takes out all the foundations that have been made there. I do not doubt it is as you say in that particular locality; maybe that is not subject to the immediate force of the water.

Mr. BOOHER. It used to be subject to the force of the water, because it cut into those banks with tremendous strength, and acres upon acres of land went into the water. You might live in Missouri to-night and to-morrow morning you would be living in Kansas. You would not have time to get your house out of the way, and the house would go along with the land. It is a very treacherous stream. The soil is

sand, and there is nothing to hold it. There is very little gumbo land along that river bottom anywhere, and for that reason it is very hard work to maintain your levees. They just cut out and go away by the mile, and move back, and the people just quit trying to do anything with the levee work.

Mr. OSBORNE. They follow revetments with the levee work?

Mr. BOOHER. Yes, sir.

Mr. OSBORNE. I agree with Judge Booher that the Government ought to take care of its own navigation, but where incidentally it results in great advantage to the local and private interests I do not believe we ought to refuse to do work because it is going to do somebody good. I do not think that is a reason for declining. But I do think that the local interests really ought, where they are receiving tremendous advantages, to be willing to help out.

Mr. FREAR. They do in your country.

The CHAIRMAN. Why is no estimate made for other sections from Kansas City to Sioux City and from Sioux City to Fort Benton?

Col. NEWCOMER. That is on account of the funds on hand being sufficient for the work up there.

The CHAIRMAN. Why are no estimates made for the Kansas River, Kans.; Osage River, Mo.; and Gasconade River, Mo.?

Col. NEWCOMER. For the same reason, the available funds are considered sufficient to provide for the needs during the next fiscal year.

Mr. DUPRÉ. Wherever there is no recommendation for maintenance, it is for the same reason you have just given in regard to these streams, that you have sufficient funds available; that accounts for those blanks under the head of maintenance?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Nashville (Tenn.) district, the first item for which estimate of appropriation was made is the Cumberland River, Tenn. and Ky., above Nashville, \$5,000 for maintenance. Can you explain the condition of the Cumberland River as to the status of the work and also why a larger estimate was not made for both sections?

Col. NEWCOMER. The improvement so far as authorized on the Cumberland River above Nashville provides for canalization from Nashville to Carthage—all that work is completed; also one lock and dam to form a pool at the head of the river, near Burnside, constructed. There is a favorable recommendation before Congress for canalizing the intermediate portion of the upper Cumberland, but that has not yet been authorized. This \$5,000 estimated for maintenance on the upper Cumberland is simply for the usual annual snagging that is required to accommodate the commerce there.

Below Nashville the funds in hand are sufficient to prosecute during the coming fiscal year the work of canalization that is in progress there. The locks and dams A, B, and C are substantially complete and work is progressing on D, E, and F. There will be those six locks and dams below Nashville.

Mr. KENNEDY. Is it contemplated that the amount estimated to complete, \$284,000, will finish the lock-and-dam system in that reach?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. I notice there is no estimate for that new project above Nashville.

Col. NEWCOMER. That is because it was not authorized.

Mr. FREAR. That is the four and a half million dollar project?

Col. NEWCOMER. That is not authorized; it was in the bill.

Mr. FREAR. It passed the House and was killed in the bill before it got through the Senate.

Col. NEWCOMER. Yes, sir.

Mr. DUPRÉ. Appropriations under the river and harbors bill become immediately available on the passage of the act, without regard to the fiscal year?

Col. NEWCOMER. Yes, sir; and the money remains available until expended. It is not appropriated simply for the fiscal year.

The situation on the Cumberland developed in this way: First, you have the two commercial points, Nashville and Burnside. Nashville was, of course, the great commercial center on the Cumberland, and locks were first built adjoining Nashville, with the idea of accommodating the traffic to Nashville. The Louisville & Nashville Railway favored Nashville in its rates and, of course, some of the traffic brought to Nashville was transferred to the Louisville & Nashville Railroad. So the first improvement was made extending down the river and up the river from Nashville, and then on the upper river there was quite a commerce, which naturally went to the railroad where the Queen & Crescent crosses the river at Burnside. That commerce was very insistent in asking for help, and Lock and Dam No. 21 was put in to pool the river at Burnside. In the first place, it afforded a harbor there which would give them all the year transportation within its limits and by getting rid of some of the worst shoals would enable them to carry river traffic some distance below No. 21.

Mr. KENNEDY. That was a project to get the traffic to the railroad.

Col. NEWCOMER. Yes, sir; practically so. It was to accommodate a traffic on the river which went to the railroad.

Mr. DEMPSEY. How many locks are there between Burnside and Nashville?

Col. NEWCOMER. Originally 21 were projected, and there have been 7 built, so that would leave 14 to be built according to the original plan, but the studies made since then have reduced that number. The additional number now proposed is 10.

Mr. DEMPSEY. Ten still?

Col. NEWCOMER. Yes, sir; to fill the gap. The present slack water extends above Nashville as far as Carthage, which is about 125 miles.

Mr. FREAR. In that connection I read Col. Newcomer's opinion in the report, and I want to ask if there are any conditions there now that are more favorable than they were at the time these examinations were made and as to the possibilities of commerce?

Col. NEWCOMER. I do not understand there have been any substantial changes in the situation since that time.

Mr. FREAR. There has been a loss of about 40 per cent during the last two or three years.

Col. NEWCOMER. I think that country is undoubtedly developing to some extent. They probably are having some increased production or other to take the place of timber. At present the timber products tend to diminish from year to year.

Mr. FREAR. This entire commerce has decreased 30 or 40 per cent. outside of sand and gravel.

Mr. DEMPSEY. Would not the enormous increase in the demand for lumber and coal give a very much better outlook for this summer?

Col. NEWCOMER. This proposition is not really a coal proposition, I am sorry to say. The coal is on the Cumberland River above Smiths Shoals and could not reach slackwater if provided. You would have to canalize above Burnside in order to get to the coal. There have been, I think, on a few occasions, some coal brought down over those shoals to Burnside, and that is one of the propositions that this pool that Dam No. 21 provided at Burnside would be used to a certain extent in that way, as the pool at Pittsburgh was used to harbor the coal waiting a favorable state to take it down, but, as a matter of fact, the Smiths Shoals are very difficult shoals, much worse than any other place on the Cumberland River, until you get to the falls away above, so steep, in fact, that there was a proposition a few years ago and authority of law was given for the development of power there by private interests. It was expected at that time. I think, that they could utilize about 100 feet of fall they have there and develop power, possibly for the electricification of the railroad or for some industrial use that might arise, but the financial interests that proposed that have actually never taken it up. I do not think that this project should be based upon the coal output at all.

Mr. DEMPSEY. How about lumber?

Col. NEWCOMER. Of course, there is more or less of that. There is considerable lumber there still, and that country has good agricultural land, and has very considerable products seeking outlet. They now have to drive stock and haul products long distances.

Mr. DEMPSEY. Is this virgin timber country that has not been cut?

Mr. KENNEDY. The report says the best timber has been cut off, and sets that out as the cause of the decrease in commerce—"The upper Cumberland having been depleted of its best timber."

Col. NEWCOMER. I think you will find still some virgin timber there.

Mr. SWITZER. I received this morning a statement from a gentleman at Cosden, W. Va., named Lewis, which, if correct, shows that they have sufficient cars provided by the Chesapeake & Ohio Railroad for the month of December to the mines tributary to that railway. We mine 2,500,000 more tons a month, or 30,000,000 more tons in a year at that rate. What is true of that railroad is true of at least nine-tenths of the other railways of this country, the big systems. I the other day was confronted with this sort of a proposition: I went to the Fuel Administration—I have a very high regard for it—but people of my vicinity, in one of my counties, were about to lose a little railway that accommodated 8 or 10 small coal mines, and I wanted to get an order from the War Department or Fuel Administration to prevent the men that bought it from tearing up the track, because the mines along this railway had been furnishing a camp at Chillicothe, Ohio. But I was promptly told they did not see any necessity of holding that railway in there or building other railways to coal mines, unless they had more cars. The great trouble was there was not sufficient cars placed at these mines to keep them running.

Mr. DEMPSEY. Is the idea to tear up the railways we have and then start all over?

Mr. SWITZER. That is true; but I know it to be a fact, and the truth of the matter is, around these coal mines in West Virginia and in a good deal of the State of Pennsylvania and down in Kentucky, at least one-third to a half more men are around these mines than they have any use for; that is, the mines are not running more than two or three days a week for the reason that there are not cars to fill, and I am of the opinion that the administration will have to look after this labor proposition. That is true on the Kanawha River; they have had half again as many men there as needed, so far as supplying the coal traffic with equipment is concerned.

The CHAIRMAN. Is this true with regard to mining coal under present conditions, that the cars must be there while the coal is brought out—they have no means of storing it or accumulating it awaiting cars?

Mr. SWITZER. If you were not raised in the coal regions, you would not understand that the expense of hauling coal out of the mine and storing it, throwing it out on the ground or putting it in warehouses and then reloading it is so great that it would not be possible to mine coal in that way and people would not want to pay the price for the coal that was mined in that way. In order to mine coal profitably, it ought to be done on a large scale, where you have large veins, and you must have your cars at your tippie under what they call running the coal out of the mine, and if you have a big mine and a hundred or two hundred cars and they load those, but for a day or two days no more cars are brought in the most of the men at those mines are idle until more cars come in, because there is no place to put the coal. If it is loaded in the little bank cars and run out on the tippie and dumped somewhere, the expense of rehandling would make it beyond the reach of the consumer.

Mr. DEMPSEY. Did the Fuel Administration say that the proper remedy for scarcity of cars was to tear up the tracks of existing railroads instead of supply cars for them?

Mr. SWITZER. I am not at all in love with the policy of the Fuel Administration, but, so far as this little project I was interested in was concerned, they probably were about right. But since then there have been arrangements made to hold that track.

The CHAIRMAN. Chattanooga (Tenn.) district: The first item of appropriation there is for the Tennessee River above Chattanooga, \$160,000, for further improvement and maintenance; also, in the same district, Tennessee River, Chattanooga to Riverton, \$40,000, for further improvement; and the Tennessee River below Riverton, \$15,000, for maintenance, and \$128,000, for further improvements. Colonel, we will be glad to hear from you about that river, its several sections and status, and whether these items so estimated are sufficient.

Col. NEWCOMER. Each of those three items is explained in the annual report. The \$160,000 requested above Chattanooga is to continue work on open-channel improvement. It is expected the funds on hand will complete the work at six of the important shoals and begin work on three others, and this \$160,000 is to continue work on those three additional shoals, which will be undertaken with the funds on hand. The \$40,000 from Chattanooga to Riverton is to

provide the project depth at the lower approach to the Hales Bar lock and dam. That dam, you will recall, is a power dam, built by private interests, the Government simply providing the lock gates, and the machinery for operating the locks, and this is to provide an adequate approach at the lower end of that lock. The \$15,000 for maintenance is required in addition to funds on hand.

The CHAIRMAN. That is in the Tennessee River below Riverton?

Col. NEWCOMER. That is in the Tennessee River below Riverton, and is for removal of shoals occurring from time to time. The \$128,000 item is a new item which has been submitted this past year by the district engineer to complete the work of improvement on the lower Tennessee. It was expected that the funds already provided for improvement there would complete the project, but there have been considerable increases in cost of work, and it is found that there are a number of small shoals, none of them large items, but they aggregate this sum of \$128,000 as estimated cost for completion. We have the necessary plant there, and we think it is advisable to go ahead at once and complete that project.

Mr. KENNEDY. What depth do you have there?

Col. NEWCOMER. That is 5 feet at extreme low water, or substantially 6 feet at ordinary low water.

Mr. KENNEDY. Do you remember how long a reach that is?

Col. NEWCOMER. Two hundred and twenty-six and one-half miles—that is, below Riverton.

Mr. FREAR. Colonel, referring to your memorandum that you have opposite the Tennessee River above Chattanooga, "Lands have not been secured for Caney Creek Lock and Dam," will you tell the committee what is that "Caney Creek Lock and Dam"? There has been a good deal of trouble there, has there not; that is, differences with the people locally?

Col. NEWCOMER. The situation is this: The approved project for the upper Tennessee provides generally for open-channel improvement, but for that one lock and dam at Caney Creek Shoals. It was expected that that lock and dam would pool a portion of the Tennessee, the lower portion of the Clinch and of the Emory River up to the coal fields in the vicinity of Harriman. It was found upon preparing the plans that there would be considerable land overflowed which had not been included in the original estimate of cost. That estimate of overflow damages became so large—something like a half million dollars—that we substantially came to the conclusion that the dam should be omitted, the expense was so great and the advantages would be relatively incommensurate with the expenses, so that there has been a recommendation made to Congress to omit that lock and dam.

Mr. FREAR. At Caney Creek?

Col. NEWCOMER. At Caney Creek.

Mr. FREAR. That is not suggested here. It is suggested the matter is still pending and efforts are being made to secure the land.

Col. NEWCOMER. You will find in the recommended modification of the project—

Mr. FREAR (interposing). A protest went up from those people there, did there not?

Col. NEWCOMER. On page 1214 you will find, under the paragraph "Recommended modifications of project," "It has been recommended

that project for the Caney Creek lock and dam be abandoned, and that the project for open-channel work be modified," as given there.

Mr. FREAR. That modification is to cost \$1,000,000?

Col. NEWCOMER. No; not the modification; but it is estimated to be the cost to complete—the cost of the lock and dam, I think, is estimated at something over \$2,000,000, and by omitting the lock and dam you would substantially save about \$2,000,000.

Mr. KENNEDY. I notice the commerce there, Colonel, has fallen off, 1916 to 1915, both in tonnage and in value?

Col. NEWCOMER. Yes, sir; that has occurred at quite a number of points.

The CHAIRMAN. Since the war?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Colonel, while it is apparent, I will ask you the question: Why no estimates are made for the Clinch River, Tenn. and Va., and for Hiwassee River?

Col. NEWCOMER. The work on the Hiwassee, the navigable portion of which is short, but used more or less, is practically complete, and no amount is deemed necessary for maintenance. On the Clinch River there is practically no commerce, except rafting of logs.

The CHAIRMAN. We now come to the Ohio River estimate for construction of locks and dams, \$5,000,000. I will ask the colonel to explain, with some completeness, the status of the work of construction of locks and dams on that river and the work contemplated with the amount available, including this proposed appropriation.

Col. NEWCOMER. You will notice that in this instance there has been put in the committee book quite a complete statement of the situation, a table taken from the annual report, showing the completed works and the percentage of completion for other works in progress. This item of \$5,000,000, as you, of course, recall, is the regular annual appropriation that Congress has been making for this improvement, upon the basis of completing it within a period of 12 years. The work now has made very substantial progress. The funds in hand will practically complete the canalization from Pittsburgh down to Lock and Dam No 29; that is, in the neighborhood of Portsmouth, Ohio.

Mr. BOOHER. Above or below Cincinnati?

Col. NEWCOMER. Above Cincinnati. Dam 37 is the one that pools the harbor at Cincinnati. We considered this project one on which, in view of the increasing importance of furnishing all possible means of transportation in that region of very intense industrial activity, the work should proceed at the full rate which Congress has authorized. Every additional lock and dam that we get in there now, of course, simply extends so much further a system which has already served a considerable territory. It is true that a number of those locks and dams are still not complete. The present situation, as I say, is shown in this table. The work is now practically completed down as far as the Muskingum. In order to complete to the Kanawha, which is pooled by No. 26, we would have to complete several dams that are still in progress there, Nos. 21, 22, 23, 24, and 25. We asked Col. Beach for a special statement covering the situation on the Ohio, and I think it would be best just to read that to the committee and probably incorporate it in the hearing, because it

sets forth what is expected to be accomplished with the present funds and the funds that we ask for. [Reading:]

WAR DEPARTMENT.
OFFICE OF THE DIVISION ENGINEER, CENTRAL DIVISION,
Cincinnati, Ohio, November 10, 1917.

From: The Division Engineer, Central Division.

To: The Chief of Engineers, United States Army, Washington, D. C.

Subject: Estimates, Ohio River improvement.

1. The following statement is submitted in response to department letter of October 17, 1917 (E. D. 15944), concerning estimates for Ohio River appropriation.

2. With funds previously appropriated and those provided by the river and harbor bill of August 8, 1917, it is expected to complete Dams 16, 17, 21, 22, 23, 24, 25, 31, 33, 35, and 39, as well as to procure site for repair station at Marietta. It had also been hoped to complete Dams 41, 43, and 48 with funds now available, though it appears probable that small additional allotments as indicated below will be required for those dams. In the case of No. 43, however, any additional allotment required will be more than offset by credits accruing to that work from plant purchased for that dam and which can be transferred and utilized elsewhere upon completion of the structure. With the present allotment of \$805,000 to the fixed dam at Emsworth it is proposed to purchase site and construct masonry of locks and guide walls. The funds now available at No. 27 are expected to be sufficient to construct the masonry of the lock and guide walls, provide the metal work for weir and pass, erect the power and lock-keeper's houses, and provide for practically all machinery, as well as the maneuver boat and the movable parts for dam, including bear-trap leaves.

3. The item of \$5,000,000 for which estimate is made in the current annual report will be applied to—

Completing fixed dam at Emsworth.....	\$700,000
Procuring and installing equipment, etc., in repair shops at Marietta.....	50,000
Completing Dam No. 27.....	376,000
Completing Dam No. 41.....	43,000
Completing Dam No. 43.....	129,000
Completing Dam No. 48.....	50,000
Making additional borings at certain sites to obtain more precise data concerning foundation conditions.....	20,000
Total	1,368,000

With the balance of \$3,632,000 from the expected appropriation of \$5,000,000 in the next river and harbor bill, work will be commenced on Nos. 30, 32, and 34, following the approved plan of construction in serial order downstream, thus leaving but one additional dam (No. 36) to be provided for in addition to funds required to complete Nos. 30, 32, and 34 to extend slack water from the head of the river to Cincinnati. The completion of the three dams just mentioned will provide slack water for the important industries, including blast furnaces, steel mills, and rather extensive lumber mills and brickyards at or in the vicinity of the towns of Ashland, Ironton, and Portsmouth, and will render practicable the transportation of coal from the Kanawha fields to Cincinnati at all times of the year by the creation of a very small flushing wave to secure the effect of a dam at the site of No. 36.

4. It will be seen, therefore, that with funds at present available and \$1,368,000 of the expected appropriation of \$5,000,000 all work in the Pittsburgh and Wheeling districts can be completed, as well as all dams in the first Cincinnati and Louisville districts now under construction.

5. This office can not urge too strongly the total appropriation of \$5,000,000 asked for, as the past season has indicated the necessity for completing the slack-water improvement of the Ohio River at the earliest practicable date. Were the improvement completed only as far as Cincinnati, the present serious coal situation in this locality would not exist, and not only would the present great handicap on production be largely removed, but manufacturers and others would be enabled to move large quantities of freight, impossible at present owing to congestion on the railroads. The part of the improvement thus far completed has been of great assistance in affording relief by means

of artificial rises, to coal tows from the Kanawha River in passing over the unimproved section of the river above Cincinnati, but this should not be relied upon indefinitely, as navigation in the upper pools is to some extent inconvenienced and interfered with whenever it becomes necessary to draw down the stage of water in those pools to give assistance below. Manufacturers and shippers generally, as well as chambers of commerce, etc., are beginning to see the possibilities of an improved Ohio River and numerous inquiries are being received for information concerning terminals, etc., indicating an interest in the river and a determination to provide necessary and adequate facilities for its utilization whenever a continuous navigable stage shall have been provided.

LANSING H. BEACH,
Colonel, Corps of Engineers.

Col. NEWCOMER. I may state, Mr. Chairman, also that the information you requested some little time ago about terminals on the Ohio River has just come in and was transmitted to you by letter this morning.

Mr. KENNEDY. Colonel, how many dams have been completed below Cincinnati?

Col. NEWCOMER. No. 37 pools Cincinnati; No. 41 is complete as to the dam, the canal is being enlarged and an additional lock being built. Of course there was a lock there before, so that they have substantial traffic facilities there now. There are no others completed. Nos. 43 and 48 are in progress and No. 39 is in progress.

Mr. KENNEDY. What was the purpose in building those dams down there?

Col. NEWCOMER. The first program of construction was to provide first for harbors at the principal commercial points, the first one being built at Pittsburgh; No. 13, at Wheeling; No. 26, to pool the mouth of the Kanawha; No. 37, at Cincinnati; No. 41, at Louisville; and No. 48 to pool the mouth of the Green River and furnish a harbor for Henderson and Evansville, where it was considered very desirable to afford a point for collection of traffic, particularly in the winter. They can get refuge in the Green River, which is practically ice free. That policy of building the detached dams was pursued until the principal commercial points were provided with locks and dams, and then we took up the program of building alternate dams going down stream, because by having the alternate dams, with a little dredging in between, you could provide for packet-boat traffic. To get the full project, those intervening dams would have to be put in, and now we are doing that. The question of providing additional dams below No. 48 is being studied very carefully, with the probability in view that we will not want to build below No. 48. You will recall that 54 locks and dams were originally contemplated?

Mr. KENNEDY. Yes.

Col. NEWCOMER. But on the lower river it is probable that dredging should be used rather than locks and dams. In the first place the natural channel facilities are much better there. They have much greater volume of discharge on account of the great number of tributaries that come in, and also it is a much more expensive proposition down there to build locks and dams on account of the much wider river and the poorer character of foundations.

Mr. KENNEDY. Do you recall what the estimated cost of maintenance of the Ohio River was in the report on the lock and dam system?

Col. NEWCOMER. I think it is in the neighborhood of \$1,000,000.

Mr. FREAR. The statement shows that \$6,967,000, or practically \$7,000,000 is on hand. You have asked for \$5,000,000 more in this bill, or over 25 per cent, or one-fourth of the amount that is estimated to go into the bill for this one project. Do you believe that the importance of this project calls for that expenditure at this time?

Col. NEWCOMER. Yes, sir; I do.

Mr. FREAR. We have spent on this river \$43,000,000. I have forgotten what the total appropriation is—somewhat larger, as I understand it. What is the total appropriation—\$59,000,000 or thereabouts?

Col. NEWCOMER. Of course, adding together the expenditures and the outstanding liabilities and the amount available, would give you that.

Mr. FREAR. \$51,000,000, and the amount to complete is \$28,000,000, or something like \$75,000,000 or \$80,000,000. What has been the increase or change in commerce, if any, since this project was first undertaken, or can you tell?

Col. NEWCOMER. I do not think there has been any substantial change.

Mr. FREAR. What will be the character of the commerce, as estimated, when the project is completed: that is, where will the increase come, where will the commerce travel, what way?

Col. NEWCOMER. It will be largely in the interchange of industrial products along the stream. When the project was undertaken the principal traffic on the Ohio River was in coal. Of course, there was a considerable traffic between local points also, as, for instance, between Cincinnati and Louisville, but the main item was coal. Coal traffic has practically disappeared, so far as shipments from the Pittsburgh district are concerned. We still have considerable coal traffic out of Kanawha River, and that will probably continue.

Mr. FREAR. To what points?

Col. NEWCOMER. To Cincinnati and other points lower down on the river.

Mr. FREAR. Is there much commerce down in the lower part of the river in the nature of coal shipments?

Col. NEWCOMER. It is not heavy now.

Mr. FREAR. Will there be any when this project is completed, in your judgment?

Col. NEWCOMER. I think you will have considerable coal from the Kanawha field and possibly from some of the fields lower down the river. It looks now as though the product of the Pittsburgh coal field will largely be consumed in the Pittsburgh district, and that commerce which has hitherto moved on freshet stages, because that was the only time there was sufficient water to take out the coal barges, will be replaced, if we are going to have a commerce there of any moment by traffic carrying the industrial products of that region. Of course, there are enormous shipments of steel products and other industrial products along the Ohio River to all parts of the country.

Mr. FREAR. That is by rail?

Col. NEWCOMER. Now by rail, and it is expected much of that will be carried by water.

Mr. FREAR. To what points?

Col. NEWCOMER. Going to the west; to all points on the Mississippi River, for instance.

Mr. FREAR. Are there any shipments of that kind to-day?

Col. NEWCOMER. There are shipments of steel products. I think the Steel Corporation has been sending some of its steel down to Louisville and to Memphis by river.

Mr. FREAR. On the Mississippi?

Col. NEWCOMER. Yes, sir. There have been cases I know in the past where persons buying pipe, for instance, in large quantities, have wanted to have it shipped by river, but the Steel Corporation would not ship it that way. They had an understanding then that their products would go by rail.

Mr. FREAR. What was the reason for that? They had contracts with the railroads; is that the reason?

Col. NEWCOMER. I do not know just why. Possibly the interlocking of interests in the Steel Corporation and the railroads led to it, but that was the policy at that time. Now the Steel Corporation has gone quite extensively into barge construction for handling its own products.

Mr. FREAR. They build barges?

Col. NEWCOMER. Yes, sir. So there has been quite a change of attitude.

Mr. SWITZER. I call your attention to the fact that there is quite a coal trade on the Ohio now being supplied by the Highland Coal Co., about 40 miles below Kanawha. They have a terminal and can load several thousand tons a day, but it is not as big as the Monongahela production.

The CHAIRMAN. If cities and localities will cooperate fully in the establishment of water transportation lines on the Ohio and in the construction of water terminals which are adequate in every respect, when the improvements on the Ohio shall be completed, it ought to be very much enlarged by that class of traffic which is carried partly by water and partly by rail. It is a long river, and the cost of traffic movement can be very much reduced on the river, and shippers where the respective terminii is on the river and in the interior can utilize the Ohio River and thereby reduce the rates of movement, and one of the purposes of this attitude of the committee in insisting upon the construction of terminals and the establishment of water lines will be to get that situation when the river is completed. That is the class of coordinated traffic between the railways and the Ohio River which at this time is not large. They are practically not prepared for it.

Mr. FREAR. A large portion of the commerce on the Ohio River of this 6,000,000 tons is sand, over one-third hauled only a short distance—12 and 13 miles. Then, too, comes coal, which is hauled comparatively a short distance, and possibly outside of that the commerce is small compared to the enormous expenditure, and I was coming to the point that the chairman has well stated. What would you say, Col. Newcomer, is the average length of haul, as near as can be ascertained from the records that you have there? For instance, the haul on the upper Mississippi River is something less than 15 miles this year on the 700-mile stretch. What is the average haul on the Ohio, where the distance is about 1,000 miles? I will say this, that from Lock 1 to Lock 10 the average haul, as I now remember, is something like 14 miles, but there is nothing to indicate very clearly below,

downstream and upstream. It says 27 miles average haul either up or down, and 28 the other way, according to my recollection, but how can we ascertain the average haul of the commerce that makes up this 6,000,000 tons you have in the record?

Col. NEWCOMER. This table is supposed to be a consolidated table for the whole river.

Mr. FREAR. Then the average haul for the whole river is about 28 miles for the 1,000-mile stretch?

Col. NEWCOMER. Yes, sir; that is given there for the downstream commerce, and the upstream is given as about 26 or practically 27 miles.

Mr. FREAR. There is another table you are familiar with, on page 2914. That gives the commerce of the first 10 locks and shows the average distance as about 15 miles.

Col. NEWCOMER. That traffic is mainly in the short distance in the Pittsburgh district.

Mr. FREAR. Those others relate to the stream at large; the 28 and 29 miles cover average distance hauled?

Col. NEWCOMER. Yes, sir. I might state that there are very extensive steel plants below Pittsburgh that are now accommodated by the pools formed. The Alaquippa and the Midland steel plants now rely upon the river almost wholly for their coal supply, and they consume very large quantities of coal.

Mr. FREAR. You are speaking of the improvement of the lower river. What as to the question of necessity of building extra locks down there, when the largest part of the traffic is on the upper part of the river?

Col. NEWCOMER. Yes, sir; Louisville and above.

Mr. KENNEDY. Have you figured out that the maintenance charge for open-channel work will be less than if you built the locks and dams on the lower reach?

Col. NEWCOMER. It is expected that the maintenance charge would be less than the interest on the cost of construction and the cost of maintaining and operating the locks and dams.

Mr. KENNEDY. It would be a saving in the long run?

Col. NEWCOMER. That is the expected situation. We have not come to a final conclusion about the matter yet.

Mr. FREAR. How many locks were in this plan originally?

Col. NEWCOMER. Fifty-four.

Mr. FREAR. And that is the largest number that has been considered?

Col. NEWCOMER. Well, they considered more for the 6-foot project. But for the present project 54 was the number. That has already been reduced definitely by omitting one lock and dam just below Louisville, No. 42, and it is expected that No. 40, just above Louisville, will be omitted by raising the dam at Louisville instead of building another lock and dam above. And then, of course, if we omit the six below 48, there will be a further reduction of the number.

The CHAIRMAN. Without objection, we will include in the record of the hearing these printed remarks and also the table at the bottom of page 29 of the committee book; also report from the Cincinnati (Ohio) engineer office on water terminals along the Ohio River.

(The reports referred to by the chairman are as follows:)

ABSTRACTS FROM THE REPORT ON THE OHIO RIVER IN THE ANNUAL REPORT OF THE
CHIEF OF ENGINEERS, UNITED STATES ARMY, 1917.

Condition at the end of fiscal year.—At the close of the year there were completed, or practically so, and in operation 21 locks and dams, and there was in addition an old lock (No. 41) at the lower end of the canal at Louisville, Ky., built many years ago but still in use to pass vessels around the Falls of the Ohio. This is inadequate in dimensions, and a new lock of size similar to the others on the river was in process of construction to accommodate the traffic of the river. The work of widening the Louisville & Portland Canal was completed. Including the new lock at No. 41, there were 15 under construction at the close of the year in various stages of progress, three of which were nearly ready to be placed in operation. Five locks and dams were placed in operation during the year. The construction of two new locks was commenced during the year. The five locks and dams (Nos. 12, 15, 19, 20, and 29) placed in operation during the year added 57.7 miles of canalized river to that available at the beginning of the year (148.5 miles), making a total of 206.2 miles available to navigation at the end of the year. There was reliable 9-foot navigation (as contemplated by the adopted project) for the entire distance, 95.8 miles, from the head of the river at Pittsburgh to Dam No. 13, just below Wheeling, the additional 110.4 miles of river project depth being provided by pools 15, 18, 19, 20, 26, 28, 29, and 37. A survey of the river throughout its length was completed and the result is shown on 280 charts with an index map, all of which have been lithographed. Land had been purchased for all sites for locks and abutments at points where construction had not yet been commenced, except abutment site 45 and sites 32, 49, 50, 51, and 54. Site for a proposed repair station at Paducah had also been purchased. At the close of the year there remained 17 locks and dams whose construction had not yet been commenced out of the total (53) contemplated under the adopted project as modified.

The total expenditures under the existing adopted project to the end of the fiscal year were \$25,449,283.27, all of which was for new work.

The table herewith shows the year of completion of the locks and dams now in operation and the percentages of completion of structures at present under construction.

The following table contains information concerning various features of the locks and dams included in the existing project:

Location.		Lock.						Dam foundation.	Per-centage com-pleted.	Year com-pleted.	Estimated cost of each lock and dam. ¹	
Miles below Pittsburgh.	With reference to nearest town or other geographical division.	Clear width.	Length.		Lift.	Depth on miter sill.						
			Between centers of gate track.	Between miter sills.		Upper pool.	Lower pool.					
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.					
1	4.7	W. Bellevue, Pa.	110	615.0		3.1	11.4	9.5	Rock-gravel	Gravel	1885	\$270,034.01
2	9.0	Cornopolis, Pa.	110	614.0		7.8	16.8	9.5	Rock	do.	1906	\$970,766.77
3	10.9	Glenosborne, Pa.	110	614.0		7.7	16.7	9.5	Gravel	Gravel-piles	1908	\$1,153,588.18
4	18.6	Legionville, Pa.	110	614.0		7.6	16.6	9.5	do.	do.	1908	\$1,071,472.31
5	23.9	Freedom, Pa.	110	614.0		8.5	14.5	9.0	do.	do.	1907	\$1,064,107.64
6	28.8	Beaver, Pa.	110	614.9		5.7	13.2	11.0	Rock-gravel	Gravel	1904	\$1,123,441.80
7	36.9	Midland, Pa.	110	616.0		6.9	15.4	11.0	Rock	Piles	1914	\$1,117,800.00
8	46.1	Newell, W. Va.	110	614.0		6.4	15.4	12.0	Piles	Piles and rock	1911	\$1,167,658.24
9	55.6	New Cumberland, W. Va.	110	616.0		7.4	15.4	11.0	do.	Piles	1914	\$1,475,980.00
10	65.7	Steubenville, Ohio.	110	618.0		8.4	16.4	11.0	Rock and piles	do.	1915	\$1,311,700.00
11	76.3	23 miles below Wellsburg, W. Va.	110	614.0		7.3	15.4	11.1	Piles	do.	1911	\$1,162,184.70
12	87.0	2 miles above Wheeling, W. Va.	110	616.0		8.4	15.4	11.0	do.	do.	1917	\$1,460,175.00
13	95.8	McMechen, W. Va.	110	614.0		7.3	13.8	9.5	do.	do.	1911	\$1,222,583.11
14	103.8	Woodland, W. Va.	110	618.0		8.3	16.4	11.0	Rock	Rock	1911	\$1,395,013.00
15	128.9	New Martinsville, W. Va.	110	618.0		7.8	15.4	11.2	do.	do.	1916	\$1,265,170.00
16	146.4	Bens Run, W. Va.	110	618.0	666.167	7.8	15.4	11.2	do.	do.	1916	\$1,302,847.00
17	167.4	4 miles above Marietta, Ohio.	110	614.2	666.167	8.2	15.4	11.0	do.	do.	1910	\$1,010,841.78
18	179.3	4 miles above Parkersburg, W. Va.	110	618.0		7.7	16.9	11.0	Piles and rock	do.	1916	\$1,250,000.00
19	191.4	Little Hocking, Ohio.	110	618.0		7.5	15.4	11.0	Rock	do.	1917	\$1,170,228.00
20	201.7	Bellevue, W. Va.	110	618.0		7.5	15.4	11.2	do.	do.	22.5	\$1,248,688.00
21	213.8	Portland, Ohio.	110	618.0	665.400	7.6	15.4	11.0	do.	do.	46.0	\$1,223,337.00
22	220.1	Ravenswood, W. Va.	110	618.0	665.400	7.8	15.4	11.2	do.	do.	6.0	\$1,163,688.00
23	230.6	Milwood, W. Va.	110	618.0	665.400	8.1	15.4	11.0	do.	do.	61.0	\$1,120,293.00
24	242.0	Graham, W. Va.	110	618.0	665.400	9.0	15.4	11.0	do.	do.	7.2	\$1,212,691.00
25	260.0	5 miles above mouth of Kanawha River.	110	618.0	665.400	9.0	15.4	11.0	do.	do.	100	\$1,227,573.74
26	278.0	Hogest, W. Va.	110	618.0	(¹)	6.4	15.4	11.1	do.	do.	0	\$1,184,000.00
27	300.3	4 miles above Guyandotte, W. Va.	110	618.0	(¹)	7.1	15.4	11.0	do.	do.	100	\$1,018,897.19
28	310.9	Huntington, W. Va.	110	618.0		8.0	15.4	11.0	do.	do.	100	\$1,290,000.00
29	319.4	3 miles below mouth of Big Sandy River.	110	618.0		7.5	15.4	11.0	do.	do.	0	\$1,220,000.00
30	338.9	3 miles below Greensburg, Ky.	110	618.0	(¹)	7.5	15.4	11.0	do.	do.	48.0	\$1,380,000.00
31	358.4	2 miles below Portsmouth, Ohio.	110	618.0	(¹)	7.5	15.4	11.0	Piles	Piles	0	\$1,240,000.00
32	383.7	1 mile below Rome, Ohio.	110	618.0	(¹)	7.0	15.4	11.0	do.	do.	48.0	\$1,240,000.00
33	404.0	3 miles above Marysville, Ky.	110	618.0	668.167	7.5	15.4	11.0	do.	do.	80.0	\$1,440,000.00
34	432.4	Chilo, Ohio.	110	618.0	(¹)	7.5	15.4	11.0	do.	do.	80.0	\$1,440,000.00
35	449.4	1 mile below New Richmond, Ohio.	110	618.0	(¹)	7.9	15.4	11.0	do.	do.	100	\$1,440,000.00
36	461.4	10 miles above Cincinnati, Ohio.	110	618.0	(¹)	7.9	15.4	11.0	do.	do.	100	\$1,440,000.00
37	481.3	Farmington, Ohio.	110	614.0	(¹)	7.3	15.4	11.0	Rock	Rock	100	\$1,240,000.00
38	501.3	Maeville, Ky.	110	614.0	(¹)	7.3	15.4	11.0	Piles	Piles	0	\$1,240,000.00

39	529.6	1 mile above Mariand, Ind.	110	666,167	8.0	\$ 15.4	\$ 11.0	Rock and piles	49.5	1,450,000.00
40	535.6	2 miles above Madison, Ind.	110	(¹)	6.0	(¹)	(¹)	Piles	0	1,650,000.00
41	604.0	Louisville, Ky.	{ 110 + 85}	608,483	29.0	11 5	11.0	Rock	83.9	2,960,396.00
42		Eliminated.								
43	630.2	3 miles below West Point, Ky.	110	666,167	9.0	\$ 15.4	\$ 11.0	Piles	83.1	1,953,000.00
44	660.3	Leavenworth, Ind.	110	(¹)	9.0	(¹)	(¹)	do.	0	1,280,000.00
45	699.7	Addison, Ky.	110	(¹)	9.0	(¹)	(¹)	Rock and piles	0	1,580,000.00
46	748.5	Between Rockport, Ind., and Owensboro, Ky.	110	(¹)	9.0	(¹)	(¹)	do.	0	1,720,000.00
47	771.3	14 miles above Newburg, Ind.	110	(¹)	9.0	(¹)	(¹)	Rock and piles	0	1,720,000.00
48	804.1	6 miles below Henderson, Ky.	110	616.0	9.0	(¹)	(¹)	Piles	58.6	1,840,000.00
49	830.5	74 miles below Mount Vernon, Ind.	110	(¹)	9.0	(¹)	(¹)	do.	0	1,640,000.00
50	859.6	Caseyville, Ind.	110	(¹)	8.0	(¹)	(¹)	do.	0	1,480,000.00
51	878.0	14 miles above Elizabethtown, Ill.	110	(¹)	9.0	(¹)	(¹)	do.	0	1,584,000.00
52	913.2	14 miles below mouth of Cumberland	110	(¹)	9.0	(¹)	(¹)	do.	0	2,248,000.00
53	946.0	Head of Grand Chain	110	(¹)	7.0	(¹)	(¹)	Gravel-piles	0	2,800,000.00
54	962.4	Mound City, Ill.	110	(¹)	15.0	(¹)	(¹)	Gravel	0	2,280,000.00
										74,632,085.35

¹ For Dams Nos. 9, 10, 12, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 27, 28, and 29 the estimated costs stated are those given in House Document No. 1159, Sixty-second Congress, third session. For the remaining dams the estimated costs stated are those given in House Document No. 492, Sixtieth Congress, first session, with the exception of Nos. 19, 41, and 43, for which special estimates are used.

² Completed dams; actual expenditures, exclusive of receipts from sales.

³ Dam below not completed.

⁴ Not commenced.

⁵ Dam below not commenced.

⁶ New lock not completed.

⁷ Clear width of old lock now in use.

REPORT BY MAJ. JOHN STEWART, ENGINEER RESERVE CORPS, ON WATER TERMINALS AT THE CITIES AND LARGER TOWNS ALONG THE OHIO RIVER, PITTSBURGH TO CAIRO.

WAR DEPARTMENT.
OFFICE OF THE DIVISION ENGINEER.
Cincinnati, Ohio, December 22, 1917.

From: Maj. John Stewart, Engineers, United States Reserves.

To: The Division Engineer, Central Division.

Subject: Water terminals at the cities and larger towns along the Ohio River, Pittsburgh to Cairo.

1. I wish to report the result of investigation of the condition of water terminals at the cities and larger towns along the Ohio River.

2. Inclosed are the reports, in duplicate, from the municipal authorities giving details of their local situations; also a compilation from the reports and my personal investigations, giving in tabulated detail the conditions that exist and showing—

(a) That there are no municipal water terminals along the Ohio River. All terminal facilities are privately owned and are inadequate to properly provide for water transportation of any magnitude and are not constructed or equipped to care for joint rail and water transportation.

(b) Landings exist at nearly all towns and cities and at many farms, etc. Some effort is being made by the larger towns and cities to keep the levee at the public landing in condition for use. The improvements run from grading the bank or levee to improve the generally steep grade, to elaborate paving as at Pittsburgh, Pa. The grade or slope of the river bank or levee is generally steep and forms a great handicap to delivering freight to the water carrier. Where unimproved, this steep grade offers an almost unpassable barrier between shipper and boats. The municipal improvements have not been extended beyond the paving of the levee or the construction of roads or streets to the water's edge. The towns and cities have sold the privilege of their water gates for a very low rental—some for nothing. In a number of cases the business of the water carrier has been shut-off by the municipalities granting unrestricted franchises to the railroads to a right of way along the water front.

It is believed that the landings have been located at points convenient to the business centers of the municipalities. They are not properly constructed or equipped to properly invite or promote water transportation, much less provide for it upon completion of the Ohio River improvements. Even under existing conditions of water traffic, proper terminal facilities would benefit the service, and if well-regulated boat lines are established the landings are inadequate for the proper conduct of water traffic.

The present water terminals on the Ohio River are the floating wharf boats owned by individuals and firms; some are owned by the steamboat lines. These boats are maintained at a number of the landings; many of the boats are floating sheds, while others have been so constructed that they form fair warehouses for the receipt, storage, and shipping of goods. They are not equipped with derricks, hoists, or other facilities or mechanical devices to handle freight. They can only handle package freight, live stock, etc., which can be carried or run over the landing plank by labor. This method of handling freight has proved a great handicap to river transportation, particularly as the "roust-about" and rivermen generally have practically disappeared during the last few years. The municipalities charge the wharf-boat wharf or landing rental and sometimes in addition make a landing charge against the boats that make the landing. The wharf boat obtains its revenue from landing and storage charges, freight handling, collections, etc.

NOTE.—"Table of Ohio River wharf-boat charges" attached hereto.

The old wharf boat, with its slow method of handling freight, greatly delaying the water carrier (which also are not equipped with mechanical devices to handle cargoes), with the steep, and in places dangerous, levee approach from the land side, discouraging producers and manufacturers to ship by water owing to the necessity of having to deliver their goods to the wharf boat under such conditions and then, perhaps, have their drays, trucks, etc., held for hours waiting on the steamer—is not conducive to the promotion of river transportation. Such equipment as now exists at the cities and larger towns is obsolete and unsuited for the business that might exist were the boats and transportation business on the river modernized, and inland waterway transportation and joint rail-and-water transportation coordinated and all properly run and regu-

lated. The present terminals are not adequate in any way for "such traffic as will probably exist when the improvement of the Ohio shall be completed" and when, as stated, inland water traffic is organized and run under proper regulation and control, similar to that now exercised over the railroads, but in a manner that will not impose undue expense in accounting, filing of tariffs, etc., upon the water carrier.

(c) As to Congressman Small's question concerning "explanation of the failure of the municipalities or localities to provide terminals, or adequate terminals," you will note that answers to this question by the municipal authorities are few; in fact, some think they have very satisfactory wharf conditions. In my personal investigations, however, several answers have stood out prominently in my conferences with the authorities, business men, and the chambers of commerce, boards of trade, etc. I give the substance of these reasons, as follows:

1. Incomplete condition of the Ohio River improvements, which renders the reliable movement of freight by water impossible for several months of every year.

2. Antipathy of railroads to inland water transportation and the action taken in many cases by them to discourage and prevent movement of freight by water.

3. Lack of supervision over and regulation of water traffic, either by itself or in combination with rail traffic, as has been found necessary in the case of railroad freight movement.

JOHN STEWART.

The CHAIRMAN. Next is the Pittsburgh district. Colonel, why is no estimate made for the Monongahela River?

Col. NEWCOMER. Because the project there has been completed. The funds have been provided in so far as work has been authorized, and the maintenance is taken care of by the indefinite appropriation for operating and care of locks and canal. I might say that there is an earnest effort on foot there to secure a further enlargement of Lock and Dam No. 6. The Steel Corporation is building very large coking plants at Clairton, and they are going to get their coal mainly from the No. 6 pool. You have recently authorized a new lock chamber there of standard dimensions. Most of the other locks below No. 6 on the Monongahela have two chambers, so as to provide for the traffic, which is a very dense traffic, and they want a second chamber at No. 6. It probably would be a desirable thing to do, but that matter has not yet been reported upon.

The CHAIRMAN. There has been authorization for the examination and report on it, has there?

Col. NEWCOMER. I question whether there has been that. It is my impression that it would require an item in the bill or an order of the committee for review of that report.

The CHAIRMAN. Will you look at your memorandum and advise us?

Col. NEWCOMER. Yes, sir. It is a very important stream, and they have a very large commerce there. We notified the interests who were urging the matter upon us that there was the situation—that it would require further authority before we could make any estimate for that second lock. They are contemplating getting about 30,000 tons a day at this coking plant.

The CHAIRMAN. And that will be an increase in commerce over and above that which now exists?

Col. NEWCOMER. Oh, yes, sir.

The CHAIRMAN. The first item for which estimate of appropriation is made is Allegheny River, open-channel work, \$5,000; and the Allegheny River construction of locks and dams \$500,000. Colonel, we would be glad to hear from you on these two items.

Col. NEWCOMER. The \$5,000 item is the usual annual cost for providing for the open channel on the Allegheny River. We have a number of regulating works that were built there in past years, which need to be maintained, and also a certain amount of snagging.

The \$500,000 item is for continuing improvement on the construction of locks and dams which was authorized several years ago, subject to the condition that the work should not be undertaken until the Secretary of War received satisfactory assurance that the obstructive bridges in Pittsburgh Harbor on the Allegheny River should be raised.

The CHAIRMAN. Will you explain the status of the matter of the removal of those bridges?

Col. NEWCOMER. That matter, you will recall, was fought over a number of times. Each time, until the last, the matter was turned down by the Secretary of War upon one ground or another. Secretary Root was the first to do it. He turned it down largely on the basis that the other larger interests, which would be adversely affected, were so important that he did not believe that the commercial advantage of the change would warrant it. Then it was taken up, and it was turned down on the basis that it had already been passed upon, and therefore was a matter that should not be reopened upon the same showing; that was by Secretary Taft. Then it was taken up a third time, and I have forgotten just now the reason for the adverse decision in that case; Secretary Dickinson, I think, passed upon it. But at the last investigation, subsequent to this indication of the view of Congress that those obstructive bridges should be modified, Secretary Baker ordered the bridges to be changed, the necessary modifications made, and specifying a time within which that should be done. Of course, that order, which is being complied with, is the satisfactory assurance to him of that change, so that we have authorized the district engineer to go ahead with the appropriation of \$300,000 which has been standing idle for several years, and he is now going ahead with the preparation of the detailed plans for taking up the first additional lock and dam, which will be No. 4. There are already three locks and dams completed on the Allegheny River, and this enlargement of the project proposes to put in five additional.

The CHAIRMAN. How far have the changes to these bridges proceeded, and how many bridges are there?

Col. NEWCOMER. I think there were eight obstructive bridges there, one of which has been eliminated by voluntary action on the part of the B. & O. Railroad in connection with some reconstruction of their line. They wanted to change their bridge and voluntarily adopted the greater elevation which was contemplated. The first action under the order, I think, has been taken by the Pennsylvania Railroad. Their main line from Pittsburgh crosses the river on a two-deck structure, and they are now raising that bridge. That was really the most urgent item in the program, and it is expected that the other bridges will be altered in due course of time. The other bridges are all owned by the city.

The CHAIRMAN. Pittsburgh?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. This project has been held up since prior to Secretary Root's time?

Col. NEWCOMER. No, sir. The project has been held up only since the act of 1913 that authorized it.

Mr. FREAR. Yes; but from time to time, prior to Mr. Root's official notice, has anything been done?

Col. NEWCOMER. There was no great pressure then for further improvement up the Allegheny River. That is, it had taken no definite shape. The commerce on the river at that time was considered sufficient to require the modification of these bridges.

Mr. FREAR. That is, before Congress acted in 1913?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What was the difference between the condition at that time and the condition when Secretary Root said that it was not sufficient?

Col. NEWCOMER. Of course, there has been a very great increase in industrial activity along the Allegheny River, and there is an urgent demand now for access to these raw materials on the stream above—large coal and limestone deposits.

Mr. FREAR. Which is the appropriation that is to be used on these improvements?

Col. NEWCOMER. The \$300,000 appropriated in 1913 is the first.

Mr. FREAR. You have a balance on hand of practically how much there—\$320,000?

Col. NEWCOMER. Practically all of the \$300,000. The rest of that consists of small balances remaining from the construction of the other locks.

Mr. FREAR. Is it necessary to go on with that work at this particular time?

Col. NEWCOMER. I think it should go on, because there is very great pressure there to get access to those raw materials, and I think that a reasonable progress should be made on that work. The district engineer sent in a very urgent request for a much larger appropriation than this.

Mr. FREAR. I have no doubt that the interests want it done. But for the public at large and the General Treasury do you think it is advisable to spend this money at this particular time? Is there a return coming commensurate with the expenditure?

Col. NEWCOMER. This is our judgment: That this amount would be reasonable and fair.

Mr. FREAR. What do you base it upon in order that we may get it in the record at this point?

Col. NEWCOMER. That the work authorized and for which we have some funds in hand should proceed at the rate we have indicated here, \$500,000.

Mr. FREAR. Why?

Col. NEWCOMER. Simply to provide that navigation facility; it is urgently needed.

Mr. FREAR. By whom?

Col. NEWCOMER. By that whole industrial district—that whole Allegheny Valley.

The CHAIRMAN. For the movement of what particular commodities?

Col. NEWCOMER. More particularly coal, limestone, and of course there are a number of very considerable industries along the Allegheny River. There are, for instance, glass factories, which could

ship their products by this route if opened up. There are also some tile works; and, of course, the part that is already improved by locks and dams is a very highly industrial and improved district. Moreover, local interests are now being put to heavy expense to alter the obstructive bridges in order to provide for this improvement, and it is only fair that the Government should make reasonable provision for its share of the work.

Mr. DEMPSEY. I know personally that the glass factories are more than doubling their capacity down in that vicinity.

Mr. FREAR. Will they ship glass by this river?

Col. NEWCOMER. If the river is improved, I do not see why they should not ship a considerable portion of their product by river, because they reach such an extensive territory through the existing streams.

Mr. FREAR. You mean ship glassware as a manufactured product down on the river?

Col. NEWCOMER. I would expect that.

Mr. FREAR. Is there any glassware shipped on the river now?

Col. NEWCOMER. They are not reached now by navigable water; that is, the stream is not improved far enough to reach them.

The CHAIRMAN. The next item is Pittsburgh Harbor, Pa., for which an estimate of \$6,000 is made for maintenance.

Col. NEWCOMER. That is simply the annual cost of maintenance of harbor. It is a very busy harbor, a place where there is apt to be a great many encroachments, and this sum is expended largely in looking after matters of that kind.

The CHAIRMAN. Colonel, why are no recommendations or appropriations made for the Big Sandy River?

Col. NEWCOMER. The department has recommended that no further work of lock-and-dam construction be undertaken on the Big Sandy and we have not asked for any additional money.

Mr. FREAR. But do you not ordinarily ask for maintenance of streams of that nature?

Col. NEWCOMER. Where the improvement is in the nature of locks and dams, we have that indefinite appropriation which provides for operation, maintenance, and care.

Mr. FREAR. Is there anything for the open-channel work?

Col. NEWCOMER. Not for the open-channel work. It is only for the maintenance of improvements involving locks and dams. It is true there have been a few exceptions to that. Congress has itself in certain instances put under that indefinite appropriation open channels, like the St. Clair Flats Canal, where there are no locks and dams, but as a rule it is only improvements involving locks and dams that are maintained under the indefinite appropriation.

Mr. FREAR. I do not suppose there is very much commerce on the Big Sandy at the present time?

Col. NEWCOMER. Very little.

The CHAIRMAN. The Kentucky River, Ky.—I see no appropriation recommended for that.

Col. NEWCOMER. That improvement has been completed so far as authorized and is being maintained out of the operating and care fund.

(Thereupon, at 12.30 o'clock p. m., the committee adjourned to meet Saturday, January 12, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Saturday, January 12, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

(Hon. William S. Greene, of Massachusetts, addressed the committee on the subject of the improvement of Taunton River and Pollock Rip Channel, Mass., which statement is printed in a separate document.)

Mr. FREAR. Just at that point, I would like to hear from Col. Newcomer in regard to this Taunton River. I would like to get the engineer's viewpoint on this. It seems to me it would be well to find out now what their reason was for putting in the contribution clause and whether or not they think it fair.

Col. NEWCOMER. I am quite willing to express my opinion on the matter as a result of the former investigation. The present project depth there appears to afford fairly reasonable accommodation to the existing traffic. The additional improvement that they desire was more for the development of the expected traffic which would handle the products of the industries of that region, which are great. These goods are now handled mainly by rail. The present water commerce is principally in coal. We felt that the advantages to the commerce in sight were doubtful as justifying the total cost of the additional improvement that they ask for; but that if the local interests were sufficiently convinced of its utility and of their intention to take advantage of it to contribute one-half the cost, the Government would be justified in furnishing the other half. In other words, the project considered simply on its own merits in comparison with other projects was hardly worthy of expending so much money out of the Public Treasury. If they would contribute 50 per cent of the cost, it would probably justify the work, as they would use it. It is substantially in the same class as the Merrimac River improvement, where we have recently made a report on carrying deep water up to Lawrence, Lowell, and those points. There also we thought it was a rather questionable proposition.

Mr. FREAR. That was up the Merrimac River?

Col. NEWCOMER. Yes, sir. We now have the channel up to Haverhill.

Mr. FREAR. The reason I asked that, Mr. Chairman, was purely a question of policy. Here the Army engineers have made a careful report. They present that to us, and we say we will rely upon it. Before us comes a Member, who is a close friend of mine, who is interested in the project. He says to the committee there is nothing to be added in addition to what has been said before the Board of Army Engineers, but he asks the Rivers and Harbors Committee to send it back to the Board of Army Engineers. It has not met with their approval, it seems, and we are to ask them to go over it again and see if they can't waive a condition they put in. It is apparently a criticism of their decision, providing we do so at this time. It is a question of policy whether it is advisable for us to do so in this case. The Army engineers have passed upon it; and without any additional information here before us we know these conditions—

Mr. SWITZER. I am willing to give him all the opportunity he wants. I am not necessarily bound by the Board of Army Engineers.

Mr. FREAR. But the Army engineers are trying to protect the United States Treasury.

Mr. SWITZER. The best way to protect the Treasury is not to make any recommendations at all. We are not hide bound here, or bound by any particular rule.

Mr. FREAR. If there is any additional testimony to be offered to the Board of Army Engineers, it would be different, but it is admitted here that there is nothing. We are to ask the board to change the report or the recommendation.

Mr. DEMPSEY. It seems to me we have overlooked two important things: As I understood Mr. Greene, he had in mind a changed condition there. All through this country, apparently, now we are going to acquire the shipbuilding industry to a degree not heretofore considered possible. We are going to try to turn out 6,000,000 tons of shipping in 18 months. If we do that we are going to set a world's record. He says this is a locality where it is expected shipbuilding will be resumed. They used to build ships there, and now they propose to do it again; and it is a natural locality to do it.

We all know that is a natural locality. As far as the engineers are concerned, I don't yield to anyone else in my deference to them as engineers; but my experience with engineers has been that they are not business men, that, while they can express to us an opinion upon the feasibility of a project from an engineering standpoint, men around this table might be very easily much better judges of the business aspect of it and the advisability of undertaking it; and this is to be referred back to them, as I understand it, with the idea of presenting the business aspect and seeing whether or not—considering the necessities of the country as a whole—the proposition is justified; and if it is justified it is one that should be undertaken to-day in the view of present conditions.

I think you all know that Mr. Greene is a very offhand man. He is a very fine man; but what he did say—while he did say that he did not have the presentation as a lawyer in mind, he did at another point go quite extensively into that shipbuilding argument, and that is news to all of us. We know that is a very reasonable thing, and it depends upon investigation to see whether or not his statement is justified—justified by the facts as they exist.

Mr. KENNEDY. Mr. Dempsey, would a proposition of that kind be helpful? It looks to me like that would be too late, after this improvement was made; if you have got to provide the facilities, it is going to take a year or two to do that.

Mr. DEMPSEY. That depends entirely on the length of the war. I don't know whether you were present when Mr. Franklin Bouillon made his talk before the committee. He made a talk there of about an hour. The first question asked him was, "How long do you think the war is going to last"? He says, "If you plan for a long war, it will be a short war; and if you plan for a short war it will be a long one." I think that is just about the situation. He said the first year France was in this war they prepared guns and ammunition on the theory that the war would be over that year. He said, "If we had prepared ammunition and guns so as to reach the Germans—enough of them, the war would have been shortened 18 months." And I think in this country we are beginning to make plans for buildings in which to install machinery, by which we ex-

pect to turn out guns. I think if that is admitted here, that we should prepare for a long struggle, this Rivers and Harbors Committee will be abreast with the other coordinated things necessary to carry on the war.

Mr. FREAR. I asked the chairman the reason in view of what Mr. Greene stated. Let me ask you, Col. Newcomer, if you know of any conditions that have come about that would change the recommendations?

Col. NEWCOMER. Nothing has come to my attention. Of course, there might easily be.

Mr. DEMPSEY. In other words, you haven't given any attention to it since you determined it?

The CHAIRMAN. We are going to take this up and hadn't we better leave it until that time?

Mr. FREAR. Yes. My thought was not to settle the matter at this time, but my idea was to ascertain the Army engineers' position. They decided what they think is for the best interest of the Government in regard to a project. Now unless there is some changed condition which calls for a reexamination when we send that back to them, it practically repudiates their position without any evidence being submitted.

Mr. DEMPSEY. I am perfectly willing to let Mr. Greene come here and bring in some evidence.

Mr. FREAR. That is proper, but haven't we adopted the policy that we would not have a reexamination within three years?

The CHAIRMAN. You are thinking of resurvey.

Col. NEWCOMER. I would like to say that we would not consider it as a repudiation, but we would simply review it to see if there had been any changes in the local conditions. We would send it back to the district engineer to find out the present situation.

Mr. FREAR. In different cases I have in mind, the Army engineers have repeatedly refused to change their recommendations, but after local pressure is brought to bear they finally yield.

Mr. KENNEDY. In that connection, it occurs to me that when we sent the matter back to the engineering board that the engineering board would feel that the committee was not satisfied with their report, and they would feel like that they were expected to change their opinion if they could do it.

Col. NEWCOMER. I think in looking over those cases where reviews have been made you will find that we very seldom made a change in our recommendation, unless there were changes in local conditions to warrant it.

Mr. SWITZER. Mr. Frear, you are not personally always willing to accept their report. Why are you willing to accept this report? When you won't accept the other reports? What is the use of making fish of one and fowl of the other?

Mr. FREAR. I haven't any case of fish or fowl in mind, for instance. Do you know of a case?

Mr. SWITZER. Well, Army engineers represent the Army. Here comes in a report here of some proposition based on a half-and-half plan, or fifty-fifty proposition. That fifty-fifty business doesn't appeal to me particularly, but if they had made the report 25 per cent to be contributed by the local community, you probably would have wanted to stick to the 25 instead of 50. Here is a Member of Con-

gress from that district, he asks that it be sent back to be reviewed and followed in the way as indicated by the engineers. Why shouldn't we be courteous enough to that Representative in a little matter of this kind, if he wants it referred again to the Army engineers, to do so just like we treat anybody else.

Mr. FLEAR. I desire to be courteous, but I ask for a specific case from the gentleman who has just spoken. What is in mind is possibly the Arkansas River. We accepted that. The Arkansas River has been repudiated by Army engineers repeatedly, and we know that the man who had the most influence in the Senate of the United States put that bill through after the Army engineers had repudiated it. That was a matter that went through where the Army engineers had repudiated it. That is a policy I submit that ought not to be permitted.

Mr. KENNEDY. If you adopt the policy suggested—

Mr. TAYLOR. It went in on the floor of the House by a bill from this committee.

Mr. SWITZER. As far as this party pressure is concerned, unless the communities make some effort and try to bring some pressure on Congress there will never be any improvements. I don't believe any censure should be indulged in of any representative or any committee for making all the effort they can that they think will be right and just to get an improvement that they think will be for the good of the Nation. I don't see any harm of bringing pressure by the people in those communities to get anything out of Congress. We know you will never get anything out of Congress unless you do bring pressure.

Mr. FLEAR. I don't want to be put in the attitude of criticizing individual Members, but I do want to stand by the men that are trying to protect the Government.

Mr. SWITZER. I don't want anybody to get the idea that there is a person standing up to protect the Government. There have been people standing up to protect the Government on these other projects when, if we had had this water power developed to-day, it would be a great relief for the community. They claimed they were protecting the people. If they had been a little more liberal, it would have been a greater protection to the Government, according to my view now.

Mr. KENNEDY. You say you like to accommodate a Member by sending it back. If you don't adopt a rule by sending it back, it looks to me like where new new developments arise it is all right to send them back, but unless they can show some new development it is a mistake.

Mr. SWITZER. If the matter was in my district or your district, you would look at it in a different viewpoint. I don't know whether I shall vote for this project when it comes up on final passage or not. Probably I will. I nearly always do, but I am trying to look at this thing from the viewpoint if it was in my district—if I were representing the people who would be personally benefited by the adoption of this project.

The CHAIRMAN. Let me make this statement, which seems advisable: We have a law authorizing the committee to refer a report of the engineering board back to the Board of Engineers for Rivers and Harbors for general review or for review on any specific phase. Be-

fore that law was passed this committee, based upon its policy to be governed by the recommendation of the Chief of Engineers, if in their opinion there was any error in the report, were required to have an examination and survey within a certain length of time, and this law permits the committee to refer back to this board of review any report with the request that it be reviewed. In other words, a rehearing, just as every court of final appeal, even the Supreme Court of the United States, any party may file a petition in that court for a rehearing, and it is so in every court of appeal in every State of the Union. It isn't regarded as a reflection upon the court to apply for a rehearing, for it is dependent upon the reasons which are given, and the court in every instance determines whether there ought to be a rehearing or not.

Mr. FREAR. Isn't there always a petition in such cases, which sets forth new facts and apprises the court of newly discovered law or facts?

The CHAIRMAN. Yes; if the committee bases upon its unwillingness or willingness, or whatever the facts may be, required in this report, should decline to adopt the report now or at any future time, without this law the only recourse would be to have a reexamination and another survey, and this law permits a review, provided the scope of the project is not enlarged in any way, and it is intended to meet conditions where for any reason, either upon the initiation of the committee, or of communities, it is believed that an error has been committed in the report.

Mr. SWITZER. I would like to suggest right there, Mr. Chairman, that the different courts frequently have different views to render, and make different decisions. A good deal depends upon the court. The views they take, of course, are controlled by general rules.

Mr. CHAIRMAN. Of course, I take it this report, just like the final opinion of a court of last resort, would be regarded as *prima facie* correct, and the burden would be upon the person who says it is not correct to show why it is not.

Mr. FREAR. I want to agree, Mr. Chairman, with what has been said, and to add that as far as this engineer's report is concerned, I do not know of any reason why there should be any required. My reason in offering this is that we are asked to send this back to the same board. That is the proposition; we are asked to send it back, without any additional information being offered, so far as has been presented to the committee; just simply to review their own action without offering anything additional. It seems that by so doing we would discredit their report, and that there could be no other interpretation put upon our action. We know nothing about the facts; nothing has been presented to us; and we are asked to send it back to them to review their own action and to change it.

Mr. DUPRÉ. Did he not say he was going to supplement his remarks to-day by a further statement?

Mr. FREAR. I did not hear that.

The CHAIRMAN. The practice is, when there is a reference, that the board refer it back to the district engineer to advise all the parties, and then a hearing is always held, usually taken down stenographically and transcribed, and then on that he makes whatever recommendation occurs to him as right, and then he sends it back to

the Board of Engineers for Rivers and Harbors, and they consider any new evidence presented.

Mr. KENNEDY. But the practice of this committee has been that there has got to be some evidence submitted to the committee here that there has been a change in conditions before we refer it. I think that has been the practice of the committee.

The CHAIRMAN. If it be the pleasure of the committee, we will proceed with the hearing of the bill. The next is the Duluth, Minn., District. The first estimate of appropriation is for Ashland Harbor, Wis., \$6,000, for maintenance. Colonel, we would be glad to hear from you in regard to Ashland Harbor.

Col. NEWCOMER. That is a small sum, relatively, considering the great importance of that harbor, required for annual maintenance, in addition to the fund on hand. The last appropriation provided for a slight extension of the channel in Ashland Harbor, which will use up the available funds, and this sum is needed for the annual maintenance.

The CHAIRMAN. In the same group is Keweenaw Waterway, Mich., with an estimate of \$15,000 for maintenance.

Mr. SWITZER. Is that a point to be cut off, or something, from Princess Point, or something?

Col. NEWCOMER. Princess Point is in that waterway. Keweenaw Point extends far out into Lake Superior, and this is a channel across Keweenaw Point, which vessels very frequently use under certain conditions of weather, and so on.

Mr. SWITZER. Have they got that improvement yet?

Col. NEWCOMER. Yes; it is practically complete, and this is simply an amount for maintenance. There is a considerable sum on hand, which is all to be expended in authorized work, mainly for repairs to breakwaters at the upper entrance. The details of that are set forth on page 1336 of the annual report. That waterway, I may state, is one which has generally hitherto been maintained under the permanent indefinite appropriation for operating and care, but as it has no lock or dam in it, it was recently taken out of that class of works, and we are now submitting annual estimates for its maintenance.

The CHAIRMAN. Now, in the same group are several improvements for which no estimate of appropriation is made. Take, for instance, the Grand Marais Harbor of Refuge, Mich. Why is no estimate submitted there?

Col. NEWCOMER. The fund on hand is considered sufficient for its maintenance.

The CHAIRMAN. There is no estimate of appropriation for Duluth-Superior Harbor, Minn. and Wis. What is the status of that, and why is no money asked for?

Col. NEWCOMER. You will observe there is quite a large sum available there. That is mainly for the extension of the anchorage basin at the inside of the Superior entrance to the harbor. The fund on hand is sufficient for maintenance.

The CHAIRMAN. Mr. Frear, was not that improvement you wished to ask something about?

Mr. FREAR. I desired to make a brief statement that occasionally, when I have been discussing projects on the floor, it has been urged that Wisconsin has very little commerce, or that its waterway inter-

ests are not material. I simply call attention to the Duluth-Superior Harbor, which had 52,000,000 tons of commerce last year, and to the little harbor of Ashland, in my own State, which had over 10,000,000 tons last year, and the average haul is about 800 miles.

Mr. DUPRÉ. Has it not rather been pointed out to you, Mr. Frear, that we have spent a great deal on the improvements in those harbors and waterways, and not that there was no commerce there?

Mr. FREAR. The improvements have not been very large, and apparently all were needed. Ashland has had \$623,000 spent on it, and its tonnage was over 10,000,000 tons last year, whereas on the lower Mississippi the Government has spent \$100,000,000 without producing one-tenth of the Ashland commerce.

Mr. DUPRÉ. Comparisons are odious.

The CHAIRMAN. Port Wing Harbor, Wis. There is no estimate for an appropriation there.

Col. NEWCOMER. That is a case where we do not think any profitable expenditure can be made in addition to the available funds. Very little is on hand. It has very little tonnage. It is practically a harbor of refuge for small boats. The existing appropriation will probably be sufficient for the next year.

The CHAIRMAN. Ontonagon Harbor, Mich. There is no estimate for an appropriation there.

Col. NEWCOMER. The fund on hand in that case is considered to be sufficient.

Mr. FREAR. May I ask a question? In view of the large amount of money that has been spent there by the Government, what is the reason the commerce has dwindled down to such a low ebb as 2,000 tons?

Col. NEWCOMER. At one time it was an important lumber port, and the lumber has been practically cut away.

The CHAIRMAN. You are speaking now of Ontonagon Harbor?

Mr. FREAR. Yes.

The CHAIRMAN. You started to make a comment as to Marquette Bay Harbor of Refuge, Colonel.

Col. NEWCOMER. The work is in good condition, and no additional funds are needed.

The CHAIRMAN. Marquette Harbor, Mich.?

Col. NEWCOMER. The same applies to that. The funds on hand are sufficient for the work.

The CHAIRMAN. And Grand Marais Harbor of Refuge, Mich.?

Col. NEWCOMER. You mentioned that first.

The CHAIRMAN. I do not think the stenographer got your comment on it.

Col. NEWCOMER. The funds on hand at Grand Marais Harbor of Refuge are sufficient to take care of the needs for the next fiscal year.

The CHAIRMAN. We come now to the Milwaukee, Wis., district. The first item for which an estimate of appropriation is made is Manistique Harbor, Mich., \$6,000 for maintenance.

Col. NEWCOMER. I might make the general remark for all of these estimates in the Milwaukee district, that the estimates submitted by the district engineer were approved without any reductions, as they appear to be justified by the details which are given in the annual report.

The work covered by the estimates throughout this district cover dredging, which is annually required at the entrance, and repairs to the permanent structures, breakwaters, and piers, which are gradually deteriorating, particularly those built of timber. The rotting of the timber requires the replacement of the upper portions from time to time. The amount involved is not much in any case. Practically all of the harbors are of considerable importance, and it is a question of maintaining the works which have cost considerable money.

The CHAIRMAN. These comments you have just made are applicable to all the improvements in the Milwaukee district?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. You have made this general comment, without citing those for which estimates of appropriations are made. Will you now proceed, Colonel, to make any comments which, in your opinion, would be necessary to further explain the reasons for the estimates, taking up each one?

Mr. FREAR. Take that next one, Colonel—Fox River. What is the explanation there, please?

Col. NEWCOMER. The estimated amount for Fox River, \$22,500, is really mainly for maintenance, although it is put under the head of further improvement. That is to be expended principally in Lake Winnebago, and from that point up to Montello, where the project depth is 6 feet and where this work is necessary in order to keep the channel open. We also from time to time can apply a small portion of the annual appropriation to continuing work on the project, for it is not yet complete. We have been doing practically no work above Montello for some time. The depth up there is 4 feet; there is practically no traffic. The Fox River, I might state, is one of the streams which was ordered to be reexamined by Congress in the act of 1915, and that required us to make a very careful and extensive survey, in order to clear up the question of damages to surrounding lands. The conditions on Lake Winnebago and other portions of the river where the adjacent lands are subject to overflow has given rise to the question of land damage and to drainage propositions for the protection of lands, all of which we expect to be cleared up by this investigation, which possibly will result in some method of cooperation between those land interests and the navigation interests, and also the power interests, which, of course, are considerable on Fox River.

Mr. FREAR. There are large paper interests there.

The CHAIRMAN. That report has not been submitted?

Col. NEWCOMER. That survey has not been completed. We expect the report some time this year.

The CHAIRMAN. The next is an estimate of an appropriation for Sturgeon Bay and Lake Michigan Ship Canal, \$13,500, for maintenance.

Col. NEWCOMER. That is a waterway which has hitherto been under the indefinite fund for operating and care, but having no lock or dam in it, we are submitting annual estimates just the same as for other open channels, and this is the amount that it is estimated will be required for maintenance for the fiscal year.

The CHAIRMAN. Algoma Harbor, Wis., \$10,000, for maintenance.

Mr. SWITZER. What place is that? Is there any town there, or city?

Col. NEWCOMER. That is a case where there is a small amount of dredging needed, including that \$10,000, but it is mainly for the repair of the concrete caisson breakwater which was built there a few years ago and which has been damaged by ice and needs to be strengthened by putting riprap on the outside.

The CHAIRMAN. Mr. Switzer, you asked some question there that the colonel did not answer.

Mr. SWITZER. I asked if there is any city or town there.

Col. NEWCOMER. It is a small place.

Mr. KENNEDY. What is the average charge for maintenance there, the average annual charge? I see you have got a very small commerce, 11,000 tons, and this is \$10,000 for maintenance. I just wondered what is the average charge for maintenance there?

Col. NEWCOMER. This is much above the average. You will find, if you will look on page 1372 of the annual report, that the amounts expended for maintenance in the past five years have been about \$2,500, \$8,700, \$367, \$588, and \$184. This is an unusual item of expense.

Mr. FREAR. The commerce remains about stationary?

Col. NEWCOMER. Yes, sir; it has a small commerce. It is not an important harbor.

Mr. SWITZER. Do you know what depth they have?

Col. NEWCOMER. The project depth is 14 feet at low lake level.

The CHAIRMAN. There are no other inquiries? The next item is Two Rivers Harbor, Wis., for which there is an estimate for an appropriation of \$3,350 for maintenance.

Col. NEWCOMER. That one includes an estimate of \$1,800 for dredging, and about \$1,200 for repairs to the pier, replacing some of the stone filling, and the balance for contingencies.

The CHAIRMAN. Manitowoc Harbor, Wis., for which there is an estimate of \$13,000 for maintenance.

Col. NEWCOMER. The main commerce of Manitowoc Harbor is that of car ferries.

Mr. FREAR. They have many grain elevators?

Col. NEWCOMER. Yes; and all sorts of railroad traffic that is taken across the lake at this point.

Mr. FREAR. It is a great grain locality.

Col. NEWCOMER. The estimate here involves a small amount of dredging, the main item being for repairs to the outer end of the north breakwater by building 100 linear feet of concrete superstructure. This item calls for \$6,000. We also need some stone filling, at a cost of nearly \$4,000, thus explaining the principal part of that estimate.

The CHAIRMAN. Sheboygan Harbor, Wis., for which an estimate is made of \$14,500 for maintenance.

Col. NEWCOMER. That includes, again, the use of a small item for dredging. We have a Government dredge, by the way, which maintains these channels, and it is estimated that an expenditure of about \$1,800 for dredging will be needed at this harbor, \$5,000 for rebuilding a portion of the superstructure of one pier, and a portion of the revetment, about \$3,700, and some riprap for the breakwater. Those are the principal items.

Mr. DUPRÉ. Are all these points fairly contiguous to one another?

Col. NEWCOMER. They are all along the west shore of Lake Michigan.

The CHAIRMAN. Port Washington Harbor, Wis., for which there is an estimate for appropriation of \$2,000 for maintenance.

Col. NEWCOMER. That is for dredging and a few minor repairs to piers.

The CHAIRMAN. Milwaukee Harbor, Wis., for which there is an estimate for the outer harbor of \$12,500, for maintenance.

Col. NEWCOMER. That is for repairs to the breakwater, and for usual overhead expenses. No work is proposed in the inner harbor, outside of the funds on hand, which are applicable to cutting off certain points in the Menominee and Kinnickinnick Rivers, and forming certain turning basins, as soon as the city provides the land it has agreed to provide.

Mr. FREAR. The amount of \$12,500 for both inner and outer harbors is sufficient for all needs?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. There is a provision in the last act, where provision is made for this group, to this effect:

Provided, That this amount is hereby made available for the maintenance of the channel to the established depth of the Milwaukee, Menomonee and Kinnickinnick Rivers, and the inner harbor of Milwaukee, Wis.

What progress has been made in the maintenance of the channel to the established depth?

Col. NEWCOMER. I do not think any work has been necessary on the inner harbor. Generally that has been maintained, I think, by the locality.

The CHAIRMAN. I asked that particularly, because Mr. Stafford was, as I recall his remarks in the House when the bill was last under consideration, of the opinion that there had been some neglect of the inner harbor there.

Col. NEWCOMER. As I understand it, the channel there is in fair condition. The annual report indicates that they have a controlling depth of 19 feet, which is the project depth. As I understand, the only work really now in contemplation is the excavation of certain points and in the widening of the channel at certain places for turning basins, and as fast as the lands are provided steps are being taken to accomplish that end. There is, I may say, a survey in progress for Milwaukee Harbor, which contemplates rather extensive work in the outer harbor by the Government, and cooperation by the locality on the development of the inner harbor.

The CHAIRMAN. It has a large commerce, and of course ought to be provided with whatever channel and other means are necessary to accommodate it.

Now, Mr. Switzer, you had some inquiry?

Mr. SWITZER. I notice there is no provision for Racine. I wanted to inquire as to whether they had succeeded in overcoming that unusual wave action that was discussed here by Representative Cooper a few years ago, for which we made one or two appropriations.

Col. NEWCOMER. That work is now nearly completed.

Mr. SWITZER. Do you know what effect it is having—whether it has overcome that trouble or not?

Col. NEWCOMER. I have had no special report recently. As a matter of fact, the work is not yet complete.

Mr. KENNEDY. It says here in the report:

The principal effect has been a stilling of the water in the river, with increased safety for vessels moored in the lower portion of the Root River. It is believed that the project has a considerable effect in controlling freight rates on coal and other bulk commodities, both locally and for transshipment.

The CHAIRMAN. The next item for which an estimate of appropriation is made is Kenosha Harbor, Wis., \$4,500 for maintenance.

Col. NEWCOMER. That includes \$2,700 for the operation of the Government dredge, for maintenance of the channel, and removing the annual shoaling, and about \$1,300 for riprap, stone to repair the breakwater, and for a certain amount of crib filling, and the rest for contingencies.

The CHAIRMAN. Now, Colonel, in this group there are several improvements for which no estimates of appropriations are made. The first is Menominee Harbor and River, Wis. Why are no estimates submitted for them?

Col. NEWCOMER. The funds on hand are considered sufficient to provide for maintenance until the next session of Congress passes its appropriations.

The CHAIRMAN. Oconto Harbor, Wis.

Col. NEWCOMER. The same applies to that. There are no funds on hand; but no work is needed.

The CHAIRMAN. Kewaunee Harbor, Wis.

Col. NEWCOMER. There we have a balance of \$27,000, which is considered sufficient.

The CHAIRMAN. Racine Harbor you have already commented on.

We will now take up the Chicago, Ill., district for which there are no estimates for appropriations submitted. I would like to ask the colonel as to each item there where there are no recommendations for appropriations. First, Chicago Harbor, Ill. Colonel, will you give us the status of that?

Col. NEWCOMER. The Government is confining its work in Chicago Harbor to the main river, below the junction of the north and south branches, and to a certain portion of the north branch of the Chicago River, and to the work of the outer harbor in the construction of breakwaters. This relatively large balance you see here of \$331,000 is in connection with the construction of the outer breakwater. We have sufficient funds to complete the work, with the exception of about \$200,000, but this amount is estimated to be sufficient for the fiscal year.

The large portion of the Chicago River and its branches, a part of the north branch, and all of the south branch and its forks are being maintained by the Sanitary District, on account of the fact that they had to do considerable work in there in connection with their sanitary project in reversing the flow and taking the water from Lake Michigan and discharging it into the Illinois River.

The CHAIRMAN. Chicago River, Ill. There is no estimate for that.

Col. NEWCOMER. In that case the balance is about \$60,000, which is considered sufficient for the work that is urgently needed for the next fiscal year.

The CHAIRMAN. There is no estimate for Calumet Harbor, Ill.

Col. NEWCOMER. There the balance of \$46,000 is considered sufficient for the work during the next fiscal year. This item of \$46,000 is for the harbor, which is in the lake at the mouth of the Calumet River. The next item is the inner channel, for which there is a balance of about \$39,000, which is also considered sufficient for its maintenance.

The CHAIRMAN. Indiana Harbor, Ind. There is no estimate submitted for that.

Col. NEWCOMER. That is a breakwater project, and the funds on hand are considered sufficient to complete the construction of the breakwater, which will form the outer harbor at that locality.

Mr. FREAR. What is being done at that point?

Col. NEWCOMER. We are building outer breakwaters so as to protect the entrance to the Indiana Harbor, which is an artificial channel connecting with the upper portion of Grand Calumet River, which gives an interior connection between this point and Calumet Harbor.

Mr. FREAR. There was a transfer of title insisted upon there, as I remember it. I have got the record here, and on page 1418 it says that that has all been complied with. Only 22 per cent of the project is completed.

Col. NEWCOMER. Yes; but we have appropriations made up to the estimated cost of the construction of the breakwater.

Mr. FREAR. The money has been appropriated?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. I notice, Colonel, that the outstanding obligations are pretty nearly equal to the amount available.

Col. NEWCOMER. Yes; that is right. The outstanding obligations nearly equal the amount available. The work is under contract.

Mr. OSBORNE. The amount available is \$499,000 and the outstanding obligations are \$452,000.

Col. NEWCOMER. The amount available is the amount that is left after deducting the outstanding obligations from the unexpended amount.

The CHAIRMAN. Indiana Harbor is quite an important improvement. Michigan City Harbor. There is no estimate of appropriation for that.

Col. NEWCOMER. We have there nearly \$16,000, and we regard that as sufficient to maintain the channel in Michigan City Harbor. It is mainly for boats that ply between Michigan City and Chicago.

Mr. DUPRÉ. The completion of the project is deemed inadvisable, I notice.

Col. NEWCOMER. Yes; there was certain work contemplated beyond the point to which the channel is maintained, but that is not now considered necessary.

Mr. KENNEDY. Will you explain the unusual large amount of money that the Government has spent there? We have spent pretty nearly \$2,000,000 for only 8,000 tons of commerce.

Col. NEWCOMER. That is true. There were rather extensive works built there, outer breakwaters and piers, and they were quite expensive.

The CHAIRMAN. Illinois River, Ill. There are two sections of that, below Copperas Creek and from Copperas Creek to La Salle, there being no estimate for either section.

Col. NEWCOMER. The balance for the Illinois River of \$84,000 below Copperas Creek and a little over \$2,000 above Copperas Creek we consider sufficient for the urgent needs of the work in that river.

The CHAIRMAN. The Illinois River is a part of that old waterway from the Chicago to the Mississippi, is it not?

Col. NEWCOMER. Yes, sir. I understand that the State is taking up again the question of the construction of that connecting link between the sanitary drainage canal and navigable water on the Illinois River. They provided State authority for construction there to cost something over \$5,000,000, but so far they have not secured the consent of the Federal Government to their undertaking the work.

The CHAIRMAN. The proposed route will be from Chicago via the sanitary canal, Des Plaines River, and Illinois River to the Mississippi River?

Col. NEWCOMER. Yes, sir. I might state that part of the route will be temporarily through a portion of the old Illinois-Michigan Canal, where they have not been able to get the power rights yet in the Des Plaines River, but that is understood to be temporary, and ultimately the waterway will be in the river.

The CHAIRMAN. Does your memory serve you sufficiently to enable you to state the status of that proposed waterway to be undertaken: that is, what they propose and the present status of it, which is to be undertaken by the State of Illinois?

Col. NEWCOMER. You will recall that a number of years ago the State decided to issue bonds to the extent of \$20,000,000 for the purpose of building a deep waterway, they called it, and the development of power along this route, with the expectation that the Federal Government would cooperate.

The CHAIRMAN. That was the old project of 14 feet?

Col. NEWCOMER. Providing a depth of 14 feet between Chicago and the Gulf. That did not meet with favor on the part of the Federal Government. Congress authorized an investigation of it, and a report was made that nothing beyond 8 or 9 feet appeared to be justified. The State then proceeded to authorize by legislative action the construction of this waterway to an 8-foot depth. That, I believe, was fought in the State courts, on the ground of its being unconstitutional, as it was not a deep waterway, as provided by the constitutional amendment, and I understand that has now been decided in favor of the constitutionality of this act of the legislature.

The CHAIRMAN. And the application of the fund to the lesser depth?

Col. NEWCOMER. And the application of the fund to the lesser depth. Application was made by the governor of the State to the War Department for a permit to go ahead with this construction, because it involved work in some of the navigable waters of the United States, but the Chief of Engineers, whose consent is necessary under the law for work of that kind in navigable streams, refused to give his consent for certain reasons, principally because he felt that the question of power, which was involved there, should be cleared up. The State expected to be given the use of all power developed, and also the question of the discharge through the Chicago Drainage Canal should be cleared up. They have there a permit to use about 4,000 feet a second. I think it is between 4,000 and 5,000 feet a second, and they are actually using more than that.

Mr. DENTON. About 10,000, are they not?

Col. NEWCOMER. They asked for 10,000, but they are not supposed to be using that much. They are using between possibly 7,000 and 8,000, and they brought suit against the Secretary of War to enjoin him from enforcing the conditions of the permit, by which they are limited to a smaller amount. Testimony has been taken, and that case has been in the hands of the Federal district judge at Chicago, Judge Landis, for several years now. I do not know when we will get the conclusion of that matter. The Chief of Engineers felt that as long as that was undecided the question of the power and of the discharge that should be permitted from the Lakes, with its possible effect on lake levels, should be cleared up, a question which was out of the jurisdiction of the States and within that of the Government. I understand now they are going to take the matter up again. Whether they will present the matter in a different way or whether the Chief of Engineers possibly might now be willing to agree to some method of procedure, I do not know. I understand that Gen. Black feels very insistent also about clearing up that situation about the discharge from the Lakes through this waterway.

The CHAIRMAN. That is the question in litigation now, whether the limitation imposed by the Secretary was a valid limitation?

Col. NEWCOMER. Yes.

The CHAIRMAN. I understood you to say that some legislation by Congress was necessary to enable the State of Illinois to proceed to carry out its claim, or did you refer to—

Col. NEWCOMER. I simply referred to the investigation.

The CHAIRMAN. By the War Department?

Col. NEWCOMER. I referred to the investigation that was authorized by Congress for this general project of deeper waterways, and the report upon it was adverse.

The CHAIRMAN. But you did recommend a waterway of an 8 or 9 foot depth?

Col. NEWCOMER. Yes, sir; that the United States cooperate by providing that depth through the Illinois River, making the State provide the rest.

The CHAIRMAN. From the head of navigation in the Illinois River?

Col. NEWCOMER. From the head of navigation to Chicago. The steps that the State has been taking for the construction of this waterway to the reduced depth have been under the provisions of the river and harbor act of March 3, 1899, which provides that the work may be undertaken in navigable streams when approved by the Chief of Engineers and the Secretary of War, if the waterway is wholly within the limits of the State. It also requires the approval of the State in that case. If the waterway is an interstate stream specific authorization of Congress is necessary. In this case the waterway they propose to improve is wholly within the limits of Illinois, and after the State approves it the work could be done by the authority of the War Department. I think that the department has felt also that the matter is one of so great importance, particularly as involving this question of the disposition of water power, which Congress has been considering so long, that possibly it ought not to be passed upon except by Congress, and, as you will recall, the matter was taken up in the river and harbors bill that failed to pass the Senate at the next to the last session.

Mr. DEMPSEY. Is not that problem involved in the survey that was authorized for the Niagara situation, the problem of the use of water for possible power elsewhere than at Niagara?

Col. NEWCOMER. I had not thought of that, but I presume it is, in so far as it takes water from the Great Lakes.

Mr. DEMPSEY. It was my understanding that that was to include a general survey of the whole situation, because I understand that 1 cubic foot of water at Niagara is worth just 4 feet at Chicago.

Col. NEWCOMER. That point, I know, has been raised, that this diversion of water from Lake Michigan means a real loss in power.

Mr. DEMPSEY. It means absolute inefficiency.

Col. NEWCOMER. So far as that feature is concerned.

Mr. FREAR. It is alleged in the pleadings in these proceedings that that is a water-power proposition on the part of the State of Illinois, is it not, rather than a matter of navigation?

Col. NEWCOMER. The matter was presented really to the people, I think, in that way, and it was alleged by the proponents of the proposition—

Mr. FREAR. I am speaking about the pleadings. Of course, I do not want your judgment. The pleadings so allege, do they not?

Col. NEWCOMER. It was alleged that the returns from the water power developed would soon reimburse the State for all expenditures made, even under the \$20,000,000 proposition, and that they would then have a perpetual source of income from this power.

Mr. FREAR. And that is alleged in the pleadings as the reason that the State is undertaking this improvement, rather than the question of navigation?

Col. NEWCOMER. I think that the improvement for the smaller waterway, which omits for the time being the use of a certain portion of the Des Plaines River, where the State has not acquired the power rights, is not so much a water-power proposition as it is for navigation.

Mr. FREAR. I was not asking for your judgment, but just what the pleadings were in this case.

Col. NEWCOMER. This case is presented mainly as a navigation proposition. The people there are very urgent in their demands for a water outlet from Chicago to the Mississippi Valley. Of course, there is some power involved in that also.

Mr. FREAR. The Hennepin Canal, which was built at an expense of seven or eight million dollars, has not been used to any appreciable extent?

Col. NEWCOMER. No, sir; not very largely.

Mr. FREAR. That was for the same purpose, was it not?

Col. NEWCOMER. Yes, sir; to give a better connection between the upper Mississippi and Chicago. At the time the canal was begun there was a very substantial commerce in the old Illinois-Michigan Canal, something like a million tons a year. That was in the early eighties, but that commerce has practically died out; there is practically none now.

Mr. FREAR. Less than 10,000 tons last year, as I now remember, and it is only for a short haul of 30 miles.

Col. NEWCOMER. Yes.

The CHAIRMAN. Grand Rapids, Mich., district. The first item there for which an estimate is made is at South Haven Harbor, Mich., \$4,000 for maintenance.

Col. NEWCOMER. That item is simply for the annual dredging required to keep the entrance channel open to project depth. That is a port of minor importance. In fact, most of these harbors on the east side of Lake Michigan are, you might say, of minor importance. A few of them have a considerable commerce.

The CHAIRMAN. The next item is Grand Haven Harbor, Mich., for which an estimate of \$25,000 is submitted for maintenance.

Col. NEWCOMER. That is mainly required, as shown in the estimates on page 1445 of the annual report, for repairs to the north pier and to the revetment by supplying stone filling, and for repairs to superstructure of the north pier. Those two items together involve \$18,200, and then the rest is for dredging and maintenance, and contingencies.

The CHAIRMAN. The next item is White Lake Harbor, Mich., for which an estimate for \$3,500 is submitted for maintenance.

Col. NEWCOMER. That is required for dredging, principally.

Mr. FREAR. Let me ask a question of the Colonel in regard to traffic across the State of Illinois on the Hennepin Canal that I find on page 2732 of the last report. The total commerce is 25,000 tons, in round numbers, of which 9,000 is reported to be commercial, and 16,000 Government. What kind of traffic is that of the Government? What is it?

Col. NEWCOMER. It is the shipment of supplies needed in the Government service.

Mr. FREAR. Is it not for improvements on the canal or anything like that?

Col. NEWCOMER. It is in connection with the improvement; yes.

Mr. FREAR. What is necessary for it?

Col. NEWCOMER. It is not commerce which should be credited to the project.

Mr. FREAR. What is the object of putting that in as a part of the traffic? If it is only intended for the improvement of the canal, it is not for commercial purposes and the commerce is only 900 tons.

Col. NEWCOMER. It is not for commercial purposes, and, of course, has no commercial value. They distinguish between that and the other traffic as they do on the upper Mississippi.

Mr. FREAR. The average person examining it and seeing that 25,000 tons of commerce would not understand it. As a matter of fact two-thirds of that would be—

Col. NEWCOMER. It would be better if it were simply given as a footnote and not included in the total.

Mr. FREAR. It seems so.

The CHAIRMAN. The next item is Manistee Harbor, Mich., for which an estimate of \$6,000 for maintenance is submitted.

Col. NEWCOMER. That is required for dredging and contingencies. We find there a case where the project is not complete, but no additional funds are asked for further improvement. The funds on hand will be applied to carrying out the project, however, and the \$6,000 is required for dredging and contingencies for the maintenance of the channel.

The CHAIRMAN. The next item is Frankfort Harbor, Mich., for which is submitted a recommendation of \$27,000 for maintenance.

Col. NEWCOMER. Frankfort Harbor is a car-ferry port. The commerce is almost wholly by car ferries. This \$27,000 is made up principally of an item of \$5,000 for dredging, for the maintenance of the project depth, and a little over \$20,000 for repairs to the piers.

The CHAIRMAN. Charlevoix Harbor, Mich., for which an estimate of \$5,000 for maintenance is submitted.

Col. NEWCOMER. That is half for dredging and half for repairs to the piers.

Mr. FREAR. May I ask the colonel if you are through with that item for Portage Lake Harbor of Refuge? Three hundred and ninety-five thousand five hundred dollars has been expended there, and it is now recommended for abandonment. What is the situation?

Col. NEWCOMER. Well, the commerce is reduced to such a small amount that the department felt that its further maintenance was not justified.

Mr. FREAR. What was the character of the commerce in the past?

Col. NEWCOMER. That, I think, was one of the lumber ports. All of those ports on the eastern shore of Lake Michigan at one time carried considerable lumber, but the lumber, of course, has practically disappeared.

Mr. FREAR. I notice that a large amount of money has been expended upon that harbor, and that now it is intended to be abandoned. I wondered what was the reason for developing it there originally.

Col. NEWCOMER. You understand these expenditures have sufficed for taking care of the commerce at those ports for many years, and at one time the commerce in lumber there was considerable.

The CHAIRMAN. The same condition exists substantially as to Arcadia Harbor, for which there has been a recommendation of discontinuance of work?

Col. NEWCOMER. Yes, sir; and also at Pentwater Harbor.

Might I make one statement in connection with the commerce on the eastern shore? While lumber was originally the great item of commerce along all those ports, as the lumber has been taken away, or the timber has been cut down, the land has been developed for agricultural purposes in varying degrees, some of it to quite a high degree, so that there is now a growing demand for a number of these harbors for handling other commodities, fruits and other products of that kind, which are shipped from the eastern shore mainly to Chicago and to Milwaukee.

Mr. FREAR. Portage Harbor must be quite a harbor now, with nearly \$400,000 expenditure—quite a good harbor—and yet it has less than 2,000 tons. That is what you now recommend for abandonment.

Col. NEWCOMER. That is true.

The CHAIRMAN. The reports of the Agricultural Department show that quite a large area of these cut-over lands in Michigan have been prepared for agriculture.

St. Joseph Harbor, Mich., in this same group. There is no estimate or no recommendation for an appropriation. Why is that, Colonel?

Col. NEWCOMER. The available balance is about \$47,000, which is considered sufficient to take care of the work.

The CHAIRMAN. St. Joseph River, Mich. There is no estimate submitted there.

Col. NEWCOMER. There we have a balance of \$10,000, which is considered sufficient for the next fiscal year.

The CHAIRMAN. Saugatuck Harbor and Kalamazoo River, Mich., for which no estimate is submitted.

Col. NEWCOMER. The fund in that case is about \$4,000, and is deemed sufficient.

The CHAIRMAN. Holland Harbor, Mich. There is no estimate submitted for that.

Col. NEWCOMER. We have a balance of \$7,000 which will take care of the urgent needs.

The CHAIRMAN. Grand River, Mich.

Col. NEWCOMER. There are about \$9,000 in that instance, which is deemed sufficient.

The CHAIRMAN. That amount is available?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. And that is deemed sufficient?

Col. NEWCOMER. Yes.

The CHAIRMAN. Muskegon Harbor.

Col. NEWCOMER. There the balance available is \$33,000, which will take care of the urgent needs of the work.

The CHAIRMAN. Ludington Harbor, Mich. There is no estimate there.

Col. NEWCOMER. We have a balance there of nearly \$80,000, and that will take care of the work. It is quite an important harbor.

The CHAIRMAN. Petoskey Harbor, Mich.

Col. NEWCOMER. That is a harbor of very minor importance, and the funds on hand are sufficient.

The CHAIRMAN. You have already commented on Pentwater Harbor, Mich., and the abandonment recommended.

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Detroit, Mich., district. The only item in the first group there, for which an estimate of appropriation is submitted are the channels in Lake St. Clair, Mich., for which \$50,000 for maintenance is recommended.

Mr. KENNEDY. The first item is St. Marys River; it is not a very considerable item?

The CHAIRMAN. I should have said St. Mary's River, Mich. I overlooked that. There \$470,000 is asked for further improvement, which is a very important improvement, too.

Col. NEWCOMER. I invite attention to the fact that in this annual report we have changed somewhat the method of grouping the work in the ship channel connecting the waters of the Great Lakes. Heretofore the various works in St. Marys River, the work at the falls, and the Hay Lake and Neebish Channels were carried separately, but the last rivers and harbors act consolidated them, so that now we are putting the St. Marys River works all in one item, and the same way with the St. Clair River and the Detroit River, and the remaining works for that channel are found in the channels in Lake St. Clair.

The item of \$470,000 for further improvement in St. Marys River is required in connection with the completion of the fourth lock at the Soo. It was considered here several years ago, when the last appropriation was made for that fourth lock, that it would probably suffice for its completion, although the full amount originally estimated as required was not appropriated. It was expected then that we would complete it for something like \$600,000 less than the estimate at the time the project was adopted. It now appears, however, on account of the increasing cost of the work, that we will need this \$470,000 additional in order to complete that fourth lock.

MR. KENNEDY. When do you expect to have the lock completed, Colonel?

COL. NEWCOMER. They expect to have that completed in 1919, in time for the opening of the navigation season.

MR. KENNEDY. Of course, when you provided for it, it was just to guard against the contingency of some of the other locks being out of commission; so while a good many of the committee were opposed to it at that time, I guess the tonnage is increasing there right along, is it not?

COL. NEWCOMER. It is increasing notably.

THE CHAIRMAN. What is the status of the development of water power there, Colonel?

COL. NEWCOMER. I think there is a lease of the power to the power company which operates the power plant under a contract with the Government, authorized by Congress.

THE CHAIRMAN. Can you state how much power, if any, is being developed now?

COL. NEWCOMER. I do not recall. It is not given in the annual report.

MR. FREAR. I call attention to the fact, so that the committee will know, that that Detroit River waterway project represents over 100,000,000 tons of commerce, as shown by the report on page 163. It has increased very rapidly.

THE CHAIRMAN. We will come to that immediately.

MR. FREAR. I thought we passed that.

THE CHAIRMAN. No; we are discussing St. Marys River now.

COL. NEWCOMER. The power proposition at the Soo is handled by another section of the office, so that I am not personally familiar with the power situation.

MR. SWITZER. Was that expected to develop a considerable amount of horsepower?

COL. NEWCOMER. No; the power developed is entirely independent of the locks. We have, of course, a little power development of our own for operating the locks.

THE CHAIRMAN. The next item is channels in Lake St. Clair, Mich., where there is an estimate of \$50,000 for maintenance.

COL. NEWCOMER. These channels consist of the St. Clair Flats Canal, at the upper end of the lake, and what is known as the Grosse Pointe Channel, at the lower end of the lake. This \$50,000 is for completing the restoration of the project dimensions of the Grosse Pointe Channel. The funds on hand will provide for a part of that work at the Grosse Pointe Channel and for the maintenance of the St. Clair Flats. The St. Clair Flats Canal was formerly carried under the

general fund for operating and care. We are now carrying it under appropriations made especially each year.

The CHAIRMAN. In that group there are two items for which no estimate is submitted. One is St. Clair River. Why was no estimate submitted for that?

Col. NEWCOMER. The only work contemplated on St. Clair River is at Port Huron, and the amount on hand is considered sufficient to do that work.

Mr. FREAR. It also states that the work on the project is delayed because of the failure of the International Joint Commission to report, in the memorandum on page 41.

Col. NEWCOMER. We had to get the consent, of course, of the International Commission and the Canadian Government to that proposition. That consent has been obtained.

Mr. DEMPSEY. Do you know how much power they develop per cubic foot at the St. Marys?

Col. NEWCOMER. At the Soo?

Mr. DEMPSEY. No; the St. Marys.

Col. NEWCOMER. That is at the Soo. That is the only falls. The development of power is at the Soo Falls. I think the fall there is in the neighborhood of about 22 feet, something like that. It takes 11 feet fall per second-foot for one horsepower, does it not? That would be about two horsepower per second-foot.

Mr. DEMPSEY. I think there are 25,000 cubic feet, so that would make 50,000 horsepower.

Col. NEWCOMER. I do not know what they develop. They have that much water going over the falls.

Mr. DEMPSEY. The Chief of Engineers says the Secretary of War in June last authorized a diversion of 25,000 cubic feet per second.

The CHAIRMAN. The next item is the Detroit River, for which no estimate is made. Why is that?

Col. NEWCOMER. There the project channel is in a fair condition, and the fund on hand is sufficient for its maintenance for the next year.

Mr. FREAR. What is the channel there at that place?

Col. NEWCOMER. The Livingstone Channel is the principal work in the Detroit River. You will remember that there was quite a large sum of money expended to provide for the traffic up and down by—

Mr. FREAR. I was interested in knowing simply the depth.

Col. NEWCOMER. It is 22 feet.

Mr. FREAR. There is a great amount of traffic there.

Col. NEWCOMER. Of, course, most of this traffic is through Lake Superior and the St. Marys and St. Clair and Detroit Rivers down to Lake Erie. The depth varies at different points, because under some conditions—for instance, where there is more current—we need a little more depth, or where there is a rocky bottom, and so on. In some places, where the bottom is soft mud, the depth is less. It varies from 20 to 22 feet at different points.

The CHAIRMAN. In the next group of projects the first item for which an estimate is made is at Alpena Harbor, Mich., \$7,000 for maintenance. Will you explain that estimate?

Col. NEWCOMER. The \$7,000 is required, in addition to the amount on hand, for the restoration of the project depth. That is the amount

that will be required for removing 70,000 cubic yards, in addition to the available funds on hand.

The CHAIRMAN. The next item is Harbor Beach Harbor of Refuge, Mich., for which an estimate of \$106,000 for further improvement is submitted. That project, I think, was adopted in the last rivers and harbors act.

Col. NEWCOMER. That is the amount estimated as required to complete the new modification of the project, which is necessary in order to fit this harbor of refuge for use by the large lake freight carriers. The depth there at present, or before the present modification was authorized, was not sufficient to accommodate the big boats. A number of them have been lost, you know, in storms on the lake. The modification consists in providing an additional depth inside of the harbor, to repair the breakwaters, which are deteriorating, and also closing the gap between the two portions of the north breakwater, in order to reduce the cost of maintenance. Through that gap considerable sand comes into the harbor.

The CHAIRMAN. In this group there is no estimate for Mackinac Harbor, Mich. Why is that?

Col. NEWCOMER. The work there is in a satisfactory condition. We have a very small balance of \$1,000 on hand, but we do not expect to require any more during the next fiscal year.

The CHAIRMAN. No estimate is made for Cheboygan Harbor, Mich.

Col. NEWCOMER. The available balance of \$4,000, according to our experience, will suffice for the maintenance of that harbor during the next fiscal year.

The CHAIRMAN. Rogers City Harbor, Mich. There is no estimate for that.

Col. NEWCOMER. The funds are practically exhausted there, but it is a minor port, and the conditions are satisfactory for the commerce of the port.

The CHAIRMAN. There is no estimate for Saginaw River, Mich.

Col. NEWCOMER. The balance of about \$4,000 is considered a sufficient amount for the next fiscal year, in view of the present condition of the channel.

The CHAIRMAN. Black River, Mich. There is no estimate for that.

Col. NEWCOMER. That work is in fair condition, so that the balance of about \$2,600 is considered sufficient. I might state that there has been a change in the situation there by the omission of the work at the mouth of the Black River, which originally involved an excavation across the shoal out to the main channel of the river, the St. Clair River, and that is now included in the project that I referred to above, about the St. Clair River, in front of Port Huron, which removes the necessity for maintaining that entrance channel.

The CHAIRMAN. Clinton River, Mich. There is no estimate there.

Col. NEWCOMER. That is a small project. The balance of \$3,000 is considered sufficient for the next fiscal year.

The CHAIRMAN. Rouge River, Mich., for which a new project was adopted in the last bill, the last act. There is no estimate submitted.

Col. NEWCOMER. The item adopting the project appropriated the full amount estimated as necessary for the completion of the work. That work has not yet begun, because there are certain things, preliminaries, that have to be settled, in the way of land rights and the reconstruction of bridges. Local interests are handling that matter,

I understand, as promptly as the situation will permit, and we will probably be able to go on with that work before very long.

The CHAIRMAN. But up to this time no work has been done?

Col. NEWCOMER. No, sir.

Mr. SWITZER. Is that Rouge River?

Col. NEWCOMER. Yes, sir.

Mr. SWITZER. Are they making preparations?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Monroe Harbor, Mich., for which no estimate is submitted.

Col. NEWCOMER. The situation there is fairly satisfactory, and no funds are needed. The balance is very small, but no work is required at this time.

(Whereupon, the committee adjourned, to meet on Monday, January 14, 1918, at 10.30 o'clock, a. m.)

COMMITTEE ON RIVERS AND HARBORS.

HOUSE OF REPRESENTATIVES,

Washington, D. C., Monday, January 14, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The Cleveland (Ohio) district, page 42 of the committee book: The first item for which an estimate of appropriation was made in that district is for Toledo Harbor, \$35,000 for maintenance. Colonel, we would be glad to hear from you as to the reason and sufficiency of that.

Col. NEWCOMER. That amount is estimated as required to remove the annual shoaling in the channel. It is a case where there is quite a long channel in the outer harbor through more or less exposed waters, where shoaling takes place from year to year, and this amount is estimated as required for the next fiscal year, the amount on hand being about \$40,000 for this year.

The CHAIRMAN. You think \$35,000 would be sufficient?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The next item is Sandusky Harbor, Ohio, \$10,000 for maintenance.

Col. NEWCOMER. In that case the length of channel is less. The expense of maintenance is less, and there is also, I think, less shoaling from the deposits brought down by floods. At Toledo, of course, you have the Maumee River coming in, and here the exposure is somewhat less. That is considered sufficient for the annual maintenance.

The CHAIRMAN. The next item is Huron, Ohio, Harbor, \$5,000 for maintenance.

Col. NEWCOMER. In that case, it is partly for dredging and partly for repair of the west pier, for which they need \$5,000.

The CHAIRMAN. Is that estimate regarded as sufficient for the maintenance for the fiscal year?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. I would like to direct the attention of the committee to certain improvements in the Cleveland, Ohio, district for which no estimate of appropriation is made, and I will ask Col.

Newcomer to take up each one of these improvements and explain why no estimate was submitted.

Col. NEWCOMER. The amounts available for the fiscal year 1918, the items at the harbors for which no estimates are submitted, which amount to \$1,600 for Port Clinton Harbor, about \$3,900 for Vermilion Harbor, about \$95,000 for Lorain Harbor, \$290,000 for Cleveland Harbor, \$15,000 for Fairport Harbor, \$30,000 for Ashtabula Harbor and \$92,000 for Conneaut Harbor, are considered sufficient not only to take care of the needs of this fiscal year, but also for the next fiscal year, so that no additional amounts were requested in those cases.

Mr. EMERSON. What is that \$290,000 for Cleveland Harbor to be used for?

Col. NEWCOMER. You will find that given on page 1543, under paragraph "Proposed operations." You will find a table there that gives the distribution of \$290,000 to a number of different items, mainly work on the breakwaters.

Mr. EMERSON. How near completed is that breakwater, and which part of the breakwater was not completed?

Col. NEWCOMER. The eastern arm of the outer breakwater is the one which is not yet completed. There is supposed to be a pierhead built there, for instance, for a light, and there was some question about just how far it should be extended. The development, in fact, at the eastern end of Cleveland Harbor is not entirely settled yet. I thought that there would be a recommendation for modification of projects here, but I do not find any. It seems to me we submitted a report recently recommending the method by which the eastern end of Cleveland Harbor should be terminated. There is to be an arm running out from the shore, which would leave an opening between it and the main breakwater for an entrance from the east. As you recall now, it is all open to the east?

Mr. EMERSON. Has your office any report on the survey that is being made in connection with the straightening of the river, or is that in the hands of the local engineer?

Col. NEWCOMER. The authority given by Congress at the last session for the investigation of new plans of improvement for straightening Cuyahoga River appropriated \$5,000 for that, and indicated certain limits within which the Government would cooperate in the improvement when undertaken. We have had no report as to any action taken by local interests or the district office in connection with that improvement. I could not tell you what the present status is.

Mr. EMERSON. When I was out home during the holidays, the rivers committee of the chamber of commerce called my attention to the fact that there are about 12 or 14 blast furnaces up the river and they were unable to get iron ore to some of them because of sand bars that had washed into the river. Do you know whether the Government undertook to clear that situation up? Most of these blast furnaces are furnishing iron to be used in the war situation.

Col. NEWCOMER. The Government has no funds that would be applicable to the maintenance of the present channel of the Cuyahoga River. That has been maintained by the locality, deepened and maintained by the locality. The only authority we have now is in connection with this new project for rectification of the channel, and

no funds we have available now are for maintenance of the old channel. It would require special further authority of Congress.

Mr. EMERSON. The city at this time has practically reached its tax limit and is unable to cooperate to any extent. Would you think it advisable to take care of the river now during this war situation?

Col. NEWCOMER. In the absence of any special investigation I do not know, of course, enough about the present situation to justify an opinion entitled to weight. We have felt that it was a proper thing for the city to cooperate by handling the inner channel. The Government has made very large expenditures for the outer channel and for a short distance in the Cuyahoga River, up to the first bridge, and above that the city has handled it. The interests affected by the shoaling are, of course, interests of great financial strength, so that apparently if they are in trouble they could help themselves.

Mr. SWITZER. How many miles up is that?

Mr. EMERSON. About 5 miles.

Mr. SWITZER. These are immense corporations?

Mr. EMERSON. They are large corporations.

Mr. SWITZER. Their resources run up to millions and millions.

The CHAIRMAN. Let me suggest for your consideration, whether you would wish included in this bill an authorization for an examination and survey of the river, even if an appropriation ought to be made by Congress, we are not in a position to do so now, because we have no estimate and report on it.

Col. NEWCOMER. I think, Mr. Chairman, that the matter could be handled, if desired, by resolution of the committee referring the report on the Cuyahoga River back for review; that is the one upon which the new project adopted last Congress was based. At that time the only improvement considered was the one straightening the channel, and whether that would place a limitation upon the further consideration, it would seem as though maintenance might be considered in connection with that report.

Mr. EMERSON. The city has reached the tax limit and is unable to appropriate any money on account of the State law. It has appropriated some \$50,000, and that is all they can do at this time.

The CHAIRMAN. You might take that up with the city and see if they wish some examination.

Mr. EMERSON. I talked with the engineer who said he had urged a larger appropriation, but the committee cut it down on account of the one per cent tax law, which prohibits them going any further.

The CHAIRMAN. Referring to Lorain Harbor, for which we adopted two new projects in the last bill.

Col. NEWCOMER. One was for extending the breakwater and one was for deepening.

The CHAIRMAN. Has any progress been made on the construction of those works yet?

Col. NEWCOMER. No progress has been made yet. It was so near the end of the navigation season it was decided that it was better to wait until the spring before beginning work on that.

Mr. FREAR. I note a contract obligation of \$6.

Col. NEWCOMER. I do not think that is a contract obligation. It is an outstanding liability, but not a contract obligation.

The CHAIRMAN. Buffalo, N. Y., district; the first item there for which estimate of appropriation is made is for Black Rock Chan-

nel and Tonawanda Harbor, \$10,000 for maintenance, and there is also an estimate for the sundry civil bill of \$300,000. Colonel, we will be glad to hear from you as to the status of that improvement and the sufficiency of the estimate to be carried in this bill of \$10,000 for maintenance.

Col. NEWCOMER. That is for dredging out the Lake Erie entrance to Black Rock Channel. It is a part subject to shoaling and this comparatively small sum is needed for the maintenance of the channel leading in from Lake Erie.

The item of \$300,000 in the sundry civil bill is an item for the last appropriation required under continuing contract authorization that was made several years ago.

The CHAIRMAN. It will complete the project?

Col. NEWCOMER. It is expected to complete the project.

Mr. DEMPSEY. Does that finish that work, Colonel?

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. As I understand it, there has been a report made by the local engineer recommending certain projects advocated by the Buffalo Chamber of Commerce and disallowing others?

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. What are the ones that are recommended?

Col. NEWCOMER. The ones that are recommended are the cutting away or excavation of a portion of the triangular area west of the State breakwater, near the Erie Basin, so as to ease the passage between Black Rock Channel and Buffalo Harbor. That is an item which has not been authorized by Congress and is really the only one that the district engineer recommended that has not already been authorized. He also did recommend another item which the locality desired, and that is the widening at the bend where Lake Erie Entrance Channel joins the Black Rock Channel, but that had already been authorized by Congress last session, so that we can proceed with it. The report that has now been prepared carries only the recommendation for one item which has not been authorized—that is, just west of the old State breakwater.

Mr. DEMPSEY. How much would those two items mean in the appropriation?

Col. NEWCOMER. I think the amount recommended for removing the triangle to ease the turn west of the State breakwater is only about \$23,000. The other one, I think, is about \$20,000. It is in the same class of figures. That can be taken care of—the last one—with this \$300,000 when that is appropriated.

Mr. DEMPSEY. This \$23,000 item would have to go into the bill separately?

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. Can you give us an idea of the items disallowed, just a brief sketch of them?

Col. NEWCOMER. The principal one, probably, from their point of view was the widening of the harbor entrance, which we discussed the other day. It was felt that experience with the improved conditions there, after getting rid of the Delaware, Lackawanna & Western Railway Co.'s coal pier should be had before going to the very considerable expense that would be involved in widening that entrance. The other items that they proposed, and which were considered and were turned down by the district engineer, were primarily turned

down because they were beyond the limits of Buffalo Harbor; they were in Black Rock Channel. The local interests desired excavation between the edge of the channel and the shore, so as to open up certain portions of the water front for commercial use. It is rather expensive, because of rock excavation, I understand, so that the district engineer rather intimated that even if there were authority to examine it, it would hardly have sufficient merit to warrant it, but he turned these items down primarily because they were beyond the limits of the item authorizing the investigation.

Mr. DEMPSEY. The survey did not extend—

Col. NEWCOMER. Did not cover that territory, according to his interpretation. Locally, they say it should, because it is a part of Buffalo Harbor, but, as a matter of fact, it is carried in the law and in our annual report as a separate project.

Mr. DEMPSEY. That is in the neighborhood of new steel plants down there?

Col. NEWCOMER. No; I do not think there are any steel plants at that point. That is between the Erie Basin and the Black Rock Lock in Black Rock Channel.

Mr. DEMPSEY. It is above the steel plant?

Col. NEWCOMER. Oh, yes; I think so. Just what the basis for that recommendation was I do not recall at present, because we felt we were not in any position, really, to consider it under the authority of law which we had.

Mr. DEMPSEY. That is within the district of the local engineer?

Col. NEWCOMER. Oh, yes.

Mr. DEMPSEY. And the only question is whether, in providing for the survey we provided in broad enough terms to include the point for which they asked the appropriation to be made?

Col. NEWCOMER. Exactly. You really should have authority there for the examination of Black Rock Channel; that is, the present designation covering that territory. I think also that there was another item that was proposed, but one upon which they made but little insistence, and that was for another connection between the Buffalo River and the outer harbor, farther south than the main entrance. That, I believe, they found was objected to so seriously by the railroad companies and others whose operations would be seriously affected by the necessary drawbridges that such work would hardly be warranted.

Mr. DEMPSEY. The thing I have always heard urged up there, since I have had anything to do with Buffalo, has been the entrance to the harbor. They were very serious about that. We took testimony once there, and the vessel men said it was positively dangerous coming into the harbor. They had a larger number of practical men, men who navigate vessels, and then men who own transportation lines, and we took testimony for a couple of days, and the opinion was all one way. These practical men said that in rough weather they could not enter the harbor at all; they had to run back and wait until the storm abated to enable them to enter the harbor.

Col. NEWCOMER. You mean to enter the outer harbor?

Mr. DEMPSEY. That is my understanding.

Col. NEWCOMER. I did not understand that. Of course, there may be at times a storm so severe as to prevent a vessel coming into a harbor of that character, but under practically all conditions, except the

most severe storms, I think they come in there without any trouble. Of course, Buffalo being at the end of the lake is subject to very severe changes of water level due to wind storms. The water may go up or down 7 or 8 feet, and, of course, that might give them insufficient depth at times to come in under certain storm conditions, but they have not asked in this survey to which you refer for any change in the entrance to the outer harbor; it is only the entrance to the inner harbor that they speak about.

Mr. DEMPSEY. Would the outer harbor be safe in a heavy storm?

Col. NEWCOMER. I think so; yes. They are safe in the outer harbor. Boats come down there and winter in that outer harbor.

Mr. DEMPSEY. As I understood you, you made a suggestion that these two small items be acted upon favorably instead of waiting for the hearing before the engineers as to the items which were disallowed?

Col. NEWCOMER. I suggested that the report recommending these be forwarded to Congress instead of waiting for further discussion of disallowed items, because they could be taken up at any time upon the request of the committee for review of its report.

Mr. DEMPSEY. Why should not that be done?

Col. NEWCOMER. I have written to Mr. Williamson, telling him. He is secretary of the chamber of commerce up there.

Mr. DEMPSEY. He is traffic manager of the chamber of commerce.

Col. NEWCOMER. I wrote to him that if they could make any additional representation they wished to submit in the near future, that there probably would still be time to submit the report to Congress before the river and harbor bill is passed, so there would be an opportunity to consider it, but if their further discussion would involve any considerable delay, it would be well to let this report go in so that the item which is recommended could be considered in passing the bill.

Mr. DEMPSEY. Why should not we do that at once, Mr. Chairman—have that report come in and have these items that have been favorably reported?

Col. NEWCOMER. That, of course, can be done. We are perfectly willing to forward that. I wrote to Mr. Williamson, however, and I expect to hold it up until I hear from him.

Mr. DEMPSEY. That is all right, then.

Col. NEWCOMER. And as soon as he says they are willing to let the matter go forward as it is, pending further discussion, to take place later, of course that will be done.

The CHAIRMAN. Answering your question propounded to me a little further, it is a matter we can consider, but it almost appears *prima facie* now we had better proceed with the appropriations in this bill based upon the report and information at present before the committee, particularly in view of the correspondence between the engineers' office and the secretary of the chamber of commerce.

Mr. DEMPSEY. It is a very small item they have recommended.

Col. NEWCOMER. There is really only one item that remains.

Mr. DEMPSEY. The others have already been authorized by Congress.

Col. NEWCOMER. Yes.

Mr. DEMPSEY. It is only \$20,000.

The CHAIRMAN. Do not have any mental reservation as to what is to be done on the floor if you can avoid it.

Mr. DEMPSEY. We will have plenty of time to take this up, will we not?

The CHAIRMAN. Yes. Colonel, the next item for which an item of appropriation is made is \$1,000 for the maintenance of Niagara River.

Col. NEWCOMER. That is a case where no work is contemplated in the way of dredging, but they are required to make examinations from time to time in looking after the stream. The balance on hand is very small, only \$644, and they think that \$1,000 would be required to take care of contingent expenses, survey of channel, etc.

The CHAIRMAN. That river requires constant supervision.

Col. NEWCOMER. Yes, sir. Mr. Chairman, if you will permit me now, I would like to suggest an item which has not been included in the estimates, but which should go to Erie Harbor. A storm in December made a breach in Presque Isle Peninsula, which protects Erie Harbor. The money on hand was promptly applied to building a barrier across the breach. But another storm came up about 10 days later which destroyed that and widened the breach somewhat. It is now closed by the accumulation of ice on the shoal, so that nothing is needed or really can be done until next spring, but the district engineer has sent in an estimate of cost of \$50,000 for restoring or repairing that breach in Presque Isle Peninsula. Erie Harbor is quite important and has 4,500,000 tons of commerce, and the maintenance of that peninsula has always been considered essential for its protection. I would suggest, therefore, that \$50,000 for maintenance be inserted for Erie Harbor, and I would further suggest that those items—Erie Harbor, Dunkirk Harbor, Buffalo Harbor, Black Rock Channel, Tonawanda Harbor, and Niagara River—be incorporated in one group. They were not put in a group last year, because no money was asked for them last year; they were not mentioned at all.

The CHAIRMAN. Do you think they are sufficiently related to justify their inclusion in one group?

Col. NEWCOMER. Yes, sir. It would be in accordance with the same principle observed before. There was nothing included last year, simply because there was no appropriation for them. This other group was called B last year, because we expected to form this group and call it group A.

Mr. FREAR. If they were grouped you would be able to take the \$216,000 now credited to Buffalo and make those repairs to Erie Harbor?

Col. NEWCOMER. Oh, no, sir. The amount that is on hand there is required for work at Buffalo Harbor.

Mr. FREAR. I mean, if it was imperative.

Col. NEWCOMER. Oh, yes; as a case of emergency we could do that.

Mr. FREAR. What is the connection between Erie Harbor and Niagara River, for instance, that would cause them to be coupled together?

Col. NEWCOMER. Erie, Dunkirk, and Buffalo are all harbors on the lake. The record shows that local interests consider Black Rock Channel to be substantially a part of Buffalo Harbor. It is right in the city there, and the channel extends down Niagara River a

few miles to Tonawanda Harbor. So this improvement includes a part of Niagara River, and this smaller improvement farther down on Niagara River, I think, should be put in that group.

Mr. DEMPSEY. What advantage is there from grouping, other than enabling the engineer's office to use a fund which has been appropriated—for instance, take that \$216,000—simply to enable the use of that fund under exigencies for Erie Harbor?

Col. NEWCOMER. That is exactly the advantage that would come from it. For instance, if that storm had occurred at a different time of the year and the breach had been made under circumstances where there was no fund available and Congress was not in session and no money could be obtained, funds appropriated for other work in the same group could be diverted. That situation would be reported to Congress at the first opportunity, and undoubtedly the funds would be restored. But you have not only that opportunity for meeting great emergencies, which rarely occur, I must say, but normally for the situation where in making estimates two years in advance for maintenance you can not well say just how much will be required. The intervening conditions may modify the situation so that what you expect to need at one time and place you may not, and you may need more at another than you expect, and the grouping system permits you to adjust the application of the funds to the actual needs as they develop.

Mr. KENNEDY. I should think, if you are going to adopt a grouping system, it would be better to have an entire engineering district in the group, so that the engineer will be permitted to use the money appropriated for maintenance on any project.

Col. NEWCOMER. We have in one instance done that. Every harbor in the Cleveland district forms a part of one group. At the other places the localities have been separated to such an extent that there was some question as to whether the grouping system should be extended so as to include them. Of course, that would be a practicable proposition to which I would have no objection if Congress would permit it.

Mr. KENNEDY. It just occurred to me that if it is a meritorious way of handling the thing in small groups it would give them more latitude and really be more desirable to have the entire district in a group.

Col. NEWCOMER. I see no objection to it myself if authority were given for it.

Mr. DEMPSEY. So far as I am individually concerned, I would rather not have the grouping system at large.

The CHAIRMAN. To embrace the whole district?

Mr. DEMPSEY. No; I would not like to have it grouped so as to tie up Erie Harbor with Buffalo.

Col. NEWCOMER. As a matter of fact, I think there is no present difficulty about this situation, Mr. Dempsey.

Mr. DEMPSEY. I know that, but I do not want to see any part of that \$216,000 going over to Erie.

Col. NEWCOMER. We are asking here for \$50,000. No; we will not need to take any from that.

Mr. DEMPSEY. The fact that you do not need it would be a good reason for not doing it.

Colonel, I would like to call your attention to page 1566, part 1, second paragraph:

Under date of May 19, 1916, the Chief of Engineers recommended that the project for this harbor be modified to include the dredging of area F to the southern harbor line of lot 3, but extending only to within 100 feet of the harbor line, and area G, as shown on map accompanying House Document No. 1139, Sixty-fourth Congress, first session, which contains the report. The estimated cost is \$132,000 for new work and \$2,000 annually for maintenance.

We do not seem to have that in the bill.

Col. NEWCOMER. That is a new project recommended there and provides, if adopted, for the excavation of certain areas in the outer harbor, so as to give additional area for the maneuvering of boats and also for the use of certain portions of the harbor front that are now inaccessible on account of the lack of depth.

Mr. DEMPSEY. Why should not that be adopted?

Mr. KENNEDY. We have not come to those propositions yet in the consideration of the bill.

Mr. DEMPSEY. But suppose it was not included in the bill on the theory it was not anything that was immediately pressing—

Mr. KENNEDY. It has to be adopted by this committee.

Col. NEWCOMER. You see we only put in estimates for adopted projects; we are not allowed to put in estimates for others.

The CHAIRMAN. The next item for which estimate of appropriation has been made is Charlotte Harbor, N. Y.; \$13,000 for maintenance.

Col. NEWCOMER. That item is the amount that is expected to be required in addition to the available funds for redredging the channel and restoring the project depth. The estimated cost of that work is \$23,000; having \$10,000 on hand, the estimate is submitted for \$13,000.

The CHAIRMAN. In the Buffalo district there are several improvements for which no estimate is submitted. First, is Dunkirk Harbor, N. Y. Why was no estimate submitted for that, Colonel?

Col. NEWCOMER. The available funds of about \$46,000 for this fiscal year are considered to be sufficient for the needs of the next year also.

Mr. FREAR. The record shows only 998 tons commerce. Is that all the commerce they have there—referring to page 43 of the committee's book?

Col. NEWCOMER. Yes; that is a completed project. It is a harbor that has very little use; fishing boats come in there. The tonnage is very small; in fact, before 1917 the tonnage was not reported for several years, and the last year before that was 1912, and it was reported only 86 tons.

Mr. FREAR. After spending nearly \$1,000,000?

Col. NEWCOMER. We have a contract for rock excavation, which will leave about \$46,000 on hand.

Mr. FREAR. What is the idea as to that being an important harbor?

Col. NEWCOMER. That is not an important harbor; it is a very unimportant harbor.

Mr. DEMPSEY. It is a curious thing. Dunkirk has been growing very rapidly and is a very prosperous locality—a great railroad center.

Mr. FREAR. How do you account for that small commerce: you are familiar, I suppose, with the conditions there?

Col. NEWCOMER. I am not especially familiar with Dunkirk Harbor. It is a harbor of minor importance and my attention has not been brought to it particularly. As I recall it, quite substantial work was authorized by Congress about 1910, on the representation made by local interests that there was a rock reef obstructing the entrance, which was causing the trouble and limiting the commercial use of the harbor, and for that reason a substantial additional amount of work was authorized. This contract obligation is a part of that work, but I doubt whether its completion will have any material effect. As you say, there is now a little commerce there, but nothing to correspond to the amounts expended.

Mr. FREAR. In other words, the chairman's recommendations to the various communities to utilize what is given them ought to be carried out?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. I have made a memorandum of that for some correspondence.

Next is Olcott Harbor, N. Y., for which no estimate of appropriation is made.

Col. NEWCOMER. That is a harbor of very minor importance; in fact, no commerce reported there, and nothing need be done.

Mr. DEMPSEY. There is just this about Olcott: You have two piers there, and they are both fallen into decay, they tell me.

Col. NEWCOMER. Yes, sir.

Mr. DEMPSEY. Both are getting in very bad condition, and in order to preserve them there should be something done.

Col. NEWCOMER. The steamboat company got permission to use one of those piers as a landing place on condition they would keep it in repair. I do not think they are doing it. As a matter of fact, I rather have the impression the steamboat company has stopped operating.

Mr. DEMPSEY. You would not let the existing work absolutely rot away?

Mr. KENNEDY. If they are not using it, why expend the Government's good money on it?

Mr. DEMPSEY. Of course, they are not using them very much, but that, Colonel, is one of the projects being considered in the power canal, and that would make it, of course, a very different situation, and make it a very important point. That is one of the three routes considered, and as I understand it, and is one of the two routes which has been recommended in previous reports. On that account it seems to me it would be well to preserve existing work.

Col. NEWCOMER. I think that the work that is now there would have practically no significance for that big project if it is carried through, because this is only a small project, and the works are not extensive. But, at the same time, it would cost a good deal of money to repair these piers and put them into first-class condition, and there is no present commercial prospect that would appear to justify that work.

Mr. KENNEDY. There is no commerce at all, it says, for 1916.

The CHAIRMAN. Will you, also, Mr. Dempsey, take up Olcott Harbor with a view to ascertaining the status of commerce there and prospect for any improvement; and if not, why not? Get them to report in writing and submit it to the committee at a later date.

Mr. DEMPSEY. Yes.

The CHAIRMAN. No estimate of appropriation for Great Sodus Bay is submitted.

Col. NEWCOMER. Available balance about \$26,000 is considered sufficient for the next fiscal year also.

The CHAIRMAN. No estimate for Little Sodus Bay Harbor.

Col. NEWCOMER. We have a balance of \$12,000, which is considered sufficient for the present needs.

The CHAIRMAN. Oswego Harbor has no estimate of appropriation.

Col. NEWCOMER. We have there a balance of about \$102,000, which will take care of the needs of the existing project. That balance is expected to be utilized mainly in the repair of the outer breakwater. This is a case, also where a new project has been recommended in connection with the use that will attend the opening of the new Welland Canal when it is enlarged.

The CHAIRMAN. Cape Vincent Harbor, N. Y.

Col. NEWCOMER. We have a balance there of about \$12,000, which will suffice for the needs of the next fiscal year.

Mr. FREAR. Cape Vincent Harbor is a very small harbor—very small commerce, too?

Col. NEWCOMER. Yes, sir.

Mr. FREAR. What is the character of commerce at Cape Vincent?

Col. NEWCOMER. I would have to look that up. On page 1593 you will get the character of the traffic. Fish constitutes 20 per cent, wood pulp 61 per cent, cattle 15 per cent, and miscellaneous 4 per cent in 1916.

Mr. FREAR. Wood pulp is the main item?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. There is no estimate of appropriation for Ogdensburg Harbor.

Col. NEWCOMER. We have a balance of about \$8,000, which we consider sufficient for the next fiscal year.

The CHAIRMAN. That brings us to the Pacific coast. The committee will now adjourn until to-morrow morning at 10.30 o'clock.

(Thereupon, at 12.45 o'clock p. m., the committee adjourned to meet to-morrow, Tuesday, January 15, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 15, 1918.

(The committee met at 10.30 a. m. After completing hearings on the Tennessee River the committee resumed the hearings on the estimates.)

**STATEMENT OF COL. H. C. NEWCOMER, CORPS OF ENGINEERS,
UNITED STATES ARMY—Resumed.**

The CHAIRMAN. Los Angeles (Cal.) district, first item, for which an appropriation is estimated for Los Angeles Harbor, or that part of it known as the inner harbor, \$100,000 for further improvements. Colonel, we will be glad to hear from you regarding that specific part of Los Angeles Harbor.

Col. NEWCOMER. The estimate is for continuing the work on the widening of the Los Angeles inner channel, which was authorized at the last session of Congress. A small appropriation was made at that time. It was considered very desirable to authorize the project, so that local interests would know what the Government intended to do, and in that way be able to accommodate themselves to the modified plan for the harbor improvement. This \$100,000, is asked for additional prosecution of the work.

Mr. DEMPSEY. What is the size of the channel?

Col. NEWCOMER. It is to be increased to about 1,000 feet.

Mr. DEMPSEY. What is the size of the entrance to the inner harbor?

Col. NEWCOMER. It is to be 750 feet wide.

Mr. DEMPSEY. What is the commerce there, as compared with that which we have at Buffalo, where we have 200 feet at the entrance?

Mr. OSBORNE. We had 2,340,000 tons.

Col. NEWCOMER. The present project is for an entrance of 750 feet width, widening to 1,000 feet inside. That, of course, in in the harbor where the boats enter and lie along the side—they are expected to do that, naturally—along both sides of the channel, and they have to be turned in there to go out, or back out, and it was thought best, for that reason, to provide for the additional width.

The CHAIRMAN. That is item D?

Col. NEWCOMER. That is item D on page 1604 of the annual report.

The CHAIRMAN. It is for the work specified in item D that this appropriation is asked for?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. What is the status of the other parts of the improvement of the Los Angeles Harbor? I mean the two—the outer harbor and the silt diversion. Why is no estimate for appropriation asked for them in this case?

Col. NEWCOMER. In case of the outer harbor, no additional work is needed. The project depth has been secured and the shoaling is very moderate; so that no funds are required at this time. The silt diversion project was authorized by Congress in 1916.

The CHAIRMAN. That is item F?

Col. NEWCOMER. That is item F, on page 1604. It was first in the 1916 act, and then a modification was authorized in the 1917 act, when it was found that the rights of way involved in the original channel were so difficult to acquire that a modified route for the improvement was desirable. The rights of way have not yet been secured, and the appropriation of \$500,000 is on hand, so that we can order the work begun as soon as the legal questions are cleared up.

The CHAIRMAN. Captain, do you have any questions?

Mr. OSBORNE. I notice you did not make any estimate for maintenance there.

Col. NEWCOMER. We have a balance of about \$174,000 for the harbor proper, which includes the appropriation made in the last act for the widening of the channel. We considered the funds on hand sufficient for maintenance.

Mr. OSBORNE. I was going to ask you about the San Diego project. Is nothing needed there at this time?

Col. NEWCOMER. Sufficient appropriation was made for that harbor in the last act. We have a very substantial balance on hand there—\$418,000.

The CHAIRMAN. Why is no estimate made for the Colorado River?

Col. NEWCOMER. We have there a small balance on hand. As a matter of fact, the Colorado River has no navigation, and this item is really for the levee which protects Yuma, on the Gila River at its junction with the Colorado River. Congress appropriated \$10,000 for the repair of that levee, and this is the balance remaining on hand. We do not anticipate the need for money there.

Mr. OSBORNE. Referring to these items for maintenance, they were segregated—Los Angeles, San Diego, and San Luis Obispo. They are consolidated here.

Col. NEWCOMER. The consolidation is only for Los Angeles Harbor. You will notice that Los Angeles Harbor has three items under it—the outer harbor, the inner harbor, and the silt diversion. A consolidation might be desirable if the committee saw fit to make it.

Mr. OSBORNE. I would like very much to get in a couple of items in regard to the disposition of handling these funds, but whether to suggest it now or wait until it goes before the committee—

Col. NEWCOMER (interposing). Did you see the letter from the Chief of Engineers about that, Captain?

Mr. OSBORNE. No.

Col. NEWCOMER. A letter was sent you about it—possibly yesterday. You have not yet received it?

Mr. OSBORNE. No.

Col. NEWCOMER. As I understand it, the two propositions you have in mind are, first, that contract authorization for the entire silt-diversion project be made, and, second, that legislation be enacted authorizing the Secretary of War to enter upon the lands required for that project without awaiting their actual acquisition.

Mr. OSBORNE. After binding the local community to take care of the damages, the rights of way, etc.

Col. NEWCOMER. The original recommendation, of course, made by the Engineer Department to Congress for that project asked for an appropriation of substantially this sum, \$500,000, and also recommended that contract authorization be given for the balance. That is the view of the department as to what would be a desirable method of procedure, so that when the work is begun it can be undertaken in the way that will contemplate the whole work. That, of course, is a question which the committee decided adversely before. The other question, that of authorizing the Secretary of War to enter upon the lands, as we considered it, is a rather doubtful proposition. The district engineer, it is true, did recommend that the Government in this case should provide the necessary rights of way, and recommended that authority be given to the Secretary of War to take possession of the lands needed at once, without awaiting the results of condemnation or other proceedings for their acquisition. His recommendation was not concurred in by the Board of Engineers on Rivers and Harbors, nor by the Chief of Engineers. It was thought that the property rights should be settled by the local interests.

Mr. OSBORNE. They do not intend to evade that condition in any way, but have given the Government full assurance that everything will be taken care of. The point is that it is not desired to await the necessarily long proceedings in court, as that will put the matter off for years, and meanwhile, from the estimates of the engineer department, the damage by silt brought down into the harbor is

\$80,000 a year. We will waste that \$80,000 annually unless this work is done, and we will also be deprived of the advantages of the improvement to the harbor.

Col. NEWCOMER. The question is whether Congress really has authority to direct the Secretary of War to enter upon lands which are being acquired by somebody else, for river and harbor improvement. If the Government were acquiring them, I judge the procedure would be quite proper; but where the local interests are acquiring them under local laws, it is a question whether they should not be acquired strictly in accordance with those local laws, or have those local laws modified to accomplish the purpose. Couldn't that arrangement be made—to have the local authorities authorized by the State to enter upon the lands at once?

Mr. DEMPSEY. I should think it could be.

Mr. OSBORNE. I do not care particularly how it is done, so long as the object is attained.

Col. NEWCOMER. That is simply the question as it appeared to us, whether it was legally a proper procedure.

Mr. DEMPSEY. The State of California can pass a statute by which they can authorize any one seeking to take lands to enter upon the lands upon giving the proper bonds.

Mr. OSBORNE. But would that help the Secretary of War?

Mr. DEMPSEY. You can turn it over to the Secretary of War.

Mr. OSBORNE. Would you take it?

Col. NEWCOMER. Oh, yes; as soon as these lands are available by any legal process.

Mr. BOOHER. Isn't there a law in California, in regard to condemnation procedure, which provides that when the parties can not agree, suit may be brought by condemnation and a deposit made, and then, as soon as the deposit is made, the authorities seeking possession can go ahead with the work, and when the business is litigated through, if the damage is higher, an assessment is made accordingly, and if it is less, settlement is made on that basis and a part of the money deposited will be returned? Isn't there such a provision in the law of California covering condemnation proceedings?

Mr. OSBORNE. I don't know; I am not a lawyer. I took this matter up with the local engineer there, and he believes that it will put back the work perhaps for years and cost the Government a good deal more money, and at my request he drew up these proposed amendments here.

Col. NEWCOMER. Don't you think those were drawn up in line with the original recommendation, which was that the Government should procure the rights of way?

Mr. OSBORNE. These were drawn up while I was home.

Col. NEWCOMER. Weren't they drawn up under the influence of that original recommendation, from the point of view that the Government should acquire the rights of way and be given authority to enter upon the lands at once? If you will notice the words in which it is drawn up, you will find that it does not indicate that the locality is to pay for the rights of way.

Mr. OSBORNE. It refers to the House document setting forth the conditions.

Col. NEWCOMER. You will notice it says to enter upon the land pending payment for the rights, and the inference from the language used would be that the Government was to pay for the rights. That can be cleared up by proper amendment.

Mr. OSBORNE. Yes.

Col. NEWCOMER. The other point is whether it is the best method of procedure.

Mr. OSBORNE. Suppose the city or county of Los Angeles gives a bond for that. I know they will. Suppose the city or county of Los Angeles gives a bond to do these things, to take care of these things. Why wouldn't that be the proper way to proceed in the matter?

The CHAIRMAN. See if I can not help to clear up this matter. The city of Los Angeles is locally cooperating, and not the State of California?

Mr. OSBORNE. Both the county and State. The State has made an appropriation, and the county of Los Angeles has voted bonds. It is doubly secured. I will state about these bonds that they are in the supreme court now on the question of their regularity, but they have been voted.

The CHAIRMAN. The provision for local cooperation attached to this project provides that before any work is undertaken by the United States assurances satisfactory to the Secretary of War shall be given that the city and county of Los Angeles will bear the cost of purchase and adjust all claims for damages and also for maintenance after its completion. I will ask Col. Newcomes if it is his understanding that the lands and realty which are acquired in connection with the project for the diversion of silt belong to the United States?

Col. NEWCOMER. They do not. The United States would probably agree that it could be handled in that way. They do not now belong to the United States.

The CHAIRMAN. After they are acquired, will they?

Col. NEWCOMER. The right of way may be either in the form of an easement or in the form of title in fee simple. That can either run to the county or to the United States. We are not concerned about that. We only want the rights securely held by the public for use for these purposes. In those cases where the locality is going to maintain the improvement, it probably would be as well for the title to remain in the county instead of the United States.

The CHAIRMAN. Would the language of the act of June 29, 1906, be applicable? It provides as follows:

That whenever any person, company, or corporation, municipal or private, shall undertake to secure any land or easement therein, needed in connection with a work of river and harbor improvement duly authorized by Congress, for the purpose of conveying the same to the United States free of cost, or for the purpose of constructing, maintaining, and operating locks, drylocks, or other works to be conveyed to the United States free of cost, and of constructing, maintaining, and operating dams for use in connection therewith, and shall be unable for any reason to obtain the same by purchase and acquire a valid title thereto, the Secretary of War may, in his discretion, cause proceedings to be instituted in the name of the United States for the acquirement by condemnation of said land or easement, and it shall be the duty of the Attorney General of the United States to institute and conduct such proceedings upon the request of the Secretary of War: *Provided*, That all expenses of said proceedings and any award that may be made thereunder shall be paid by the said person,

company, or corporation, to secure which payment the Secretary of War may require the said person, company, or corporation to execute a proper bond in such amount as he may deem necessary before said proceedings are commenced.

Mr. OSBORNE. That authorizes the Attorney General to take proceedings?

The CHAIRMAN. Yes.

Col. NEWCOMER. We have a later law than that.

The CHAIRMAN. What is it?

Mr. BOOHER. There is a later law.

Col. NEWCOMER. Section 9 of the act of August 8, 1917, amended that act.

The CHAIRMAN. Amended this?

Col. NEWCOMER. Yes; so as to take in States as well as municipalities and other corporations. Whenever any local body wishes to secure land in connection with any work of river and harbor improvement, the power of eminent domain of the Government can be exercised by protecting the Government against any cost. But that does not meet this situation. That simply means that the Government could institute the necessary proceedings, instead of the locality.

Mr. BOOHER. Couldn't we get an act along the same lines that would meet this situation?

Col. NEWCOMER. What he wants is this: The authority of the Secretary of War to enter upon the lands upon beginning the proceedings without awaiting the results. This is an authority not given in any of the Federal laws. A number of the States have it where the authorities exercising the power of eminent domain can enter upon the lands without awaiting the result of the condemnation proceedings, through giving a bond or making a deposit or some other method.

The CHAIRMAN. I may say there that the engineers wish to render any advisory aid in their power; but I would suggest, Captain, from all the information that is available now, that the real remedy lies with the Legislature of the State of California, unless your laws already cover it.

Mr. OSBORNE. I don't know whether the laws cover it or not. The difficulty in putting it up to the legislature is that the legislature does not meet until a year from now. Our legislature does not meet this year.

Col. NEWCOMER. We, of course, have no objection to any provision that is considered legally practicable, which still would leave upon the locality the actual cost of the work.

Mr. OSBORNE. We do not want to avoid that, or do anything that will in any way put the United States to any risk whatsoever. What we do want is to get at the work. We are ready to comply with the law, but we want to get at the work. It is of very high importance that we get at it.

Col. NEWCOMER. Have any proceedings been begun yet by the locality to secure these lands?

Mr. OSBORNE. I don't know just what has been done, but I presume there has. Just where they will have to bring condemnation proceedings, I don't know. People are often unreasonable about

these things. The work will have to go through quite a bit of private property and over to a corner of the city of Long Beach.

Col. NEWCOMER. Yes.

Mr. OSBORNE. The proceedings may stretch out for years, and in the meantime we are wasting money and losing time.

The CHAIRMAN. Is it possible that you may find some existing law of the State of California that provides that where condemnation proceedings are entered into for a public purpose the power is given to enter upon the property either in advance of the award or pending any appeal that may be taken; and, if so, that it would meet the situation which you are confronted with here? At any rate, as title to the property is not to be given to the United States, the remedy lies with your law; and if the existing law is not adequate, then a proper law might be enacted.

Mr. OSBORNE. I think it is the intention of our people to turn it over to the United States and give bond. I do not think they were to hold it.

The CHAIRMAN. Well, I am not so sure about that.

Mr. OSBORNE. That is their intention, I believe.

The CHAIRMAN. I am not so sure that the United States is to take it over.

Mr. OSBORNE. Well, that is another thing; but speaking about what their intentions are, that is what I believe them to be. The work, of course, is a public work, as a part of the harbor.

Col. NEWCOMER. The question, to my mind, is merely a legal point as to procedure, whether or not it is the proper thing to do under the particular circumstances. I don't really know whether Congress has the power to direct the Secretary of War to enter upon lands, unless the Government is acquiring them. It would be a good thing to have such authority. Possibly a general item could be framed giving this authority, and at the same time covering this.

The CHAIRMAN. It is a matter for careful thought; but I would suggest that the Federal Government might be confronted with this obstacle: The landowner might set up in bar of the proceeding to condemn that this was not a public purpose for the United States, however public it might be.

Col. NEWCOMER. I do not think that could be maintained. It is for the protection of the harbor.

The CHAIRMAN. On that theory, that might be so.

Col. NEWCOMER. But whether it is possible that the property owner might be able to enjoin the Secretary of War from entering upon the land before it is acquired is another question.

Mr. OSBORNE. I would like to put these two proposed provisions in the record, so that they may appear in the report.

The CHAIRMAN. If they are in shape you may hand them to the clerk.

Mr. OSBORNE. Very well.

With a view to expediting the completion of the project adopted by river and harbor act approved July 27, 1916, for the protection of Los Angeles and Long Beach Harbors, in accordance with the report printed in House Document 462, Sixty-fourth Congress, first session, as soon as the Secretary of War shall have received satisfactory assurances from local interests of compliance with the conditions set forth in said document, he is authorized to direct immediate entry

upon the land required for right of way, the land to be purchased by agreement, if practicable, otherwise by condemnation, in accordance with the provisions of chapter 3628, approved June 29, 1906, entitled "An act to amend an act entitled 'An act authorizing the condemnation of land or easement needed in connection with work of river and harbor improvements at the expense of persons, companies, or corporations' approved May 16, 1906," but all adjustment of title, easement, damage, and compensation shall be accomplished without delaying prosecution of the work.

The Secretary of War is hereby authorized to enter into a contract, or contracts, for such materials and labor as are necessary to complete the project for the protection of Los Angeles and Long Beach Harbors from silt, adopted by the river and harbor act approved July 27, 1916, in accordance with the report printed in House Document No. 462, Sixty-fourth Congress, first session, to be paid for as appropriations may from time to time be made by law, not to exceed in the aggregate \$1,080,000, inclusive of the amount heretofore appropriated (\$500,000).

The CHAIRMAN. There is no estimate for San Luis Obispo. Were any funds asked for for that?

Col. NEWCOMER. No work is contemplated or needed there.

Mr. OSBORNE. There is some considerable business done there, isn't there?

Col. NEWCOMER. Yes.

Mr. OSBORNE. I want the committee to help out on this thing. We have our work there, the river is still running, and we have the silt.

The CHAIRMAN. I think that is a matter to be worked out between yourself, as representative of the local people, and the Engineering Department—mostly the local authorities. You have certainly done all you could with reference to the situation.

Mr. OSBORNE. As far as I know, the State of California or the county of Los Angeles, can take possession of that ground; presuming there is a law which permits them to do it. I think very likely there is. I am not a lawyer. Supposing this were done, could the Secretary of War go on with this work?

Col. NEWCOMER. That again is a legal question. I judge that he could.

The CHAIRMAN. There is no doubt about that, I think.

Col. NEWCOMER. That right could be transferred to the Federal Government.

The CHAIRMAN. We have now come to the first San Francisco, Cal., district. The first item is Oakland Harbor, \$4,000, for maintenance, and \$100,000 for further improvements. I should be glad to hear from you on that, Colonel.

Col. NEWCOMER. That small item for maintenance is mainly for the current expenses for oversight or supervision of the harbor. The \$100,000 item, for further improvement, is for the completion of the tidal canal from the inner harbor to San Leandro Bay. It is an element of the project upon which we have entered with funds already appropriated, and this amount is required to complete it. This tidal canal was originally intended merely to connect this body of water with the harbor, so as to get the benefit of tidal flow for the maintenance of the channel in the harbor, but now it has become a commercial proposition as well as one for the maintenance of the harbor.

The CHAIRMAN. Will this \$100,000 complete that project?

Col. NEWCOMER. No, sir. That completes only this element of the project. Further funds would be needed if we were to complete the

main harbor channel to its full width. This was dredged its full depth, but not the full width.

The CHAIRMAN. That is the main harbor. Do you think \$100,000 will meet all immediate commercial needs in connection with this project?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. This is the only estimate of appropriation for any of these improvements in the first San Francisco district. I will direct your attention, Col. Newcomer, to each one in order that we may have in the record a statement of the reason as to why no estimate is made. San Francisco Harbor?

Col. NEWCOMER. The available balance is about \$26,000 and is considered sufficient for the next fiscal year.

The CHAIRMAN. Redwood Creek, Cal.

Col. NEWCOMER. In that case there is a balance of about \$10,000, which we think will suffice for the next fiscal year, as considerable maintenance work has recently been done there.

The CHAIRMAN. Richmond Harbor, Cal.

Col. NEWCOMER. This is a case where the local interests are to cooperate and the conditions of local cooperation have not yet been cleared up sufficiently to permit us to proceed with the work for which we have an appropriation of \$100,000. No additional funds are requested for the coming fiscal year.

The CHAIRMAN. If the conditions of local cooperation are complied with within a reasonable time, will this be sufficient for the coming year?

Col. NEWCOMER. I think so, because one of the conditions of local cooperation is that they must supply one-half of the funds.

Mr. OSBORNE. I would state that Mr. Curry, who represents that district, is very ill just at the present time, and I have not talked with him about that. I know he is very much interested in it.

The CHAIRMAN. San Pablo Bay. There is no estimate submitted for that.

Col. NEWCOMER. We found that the dredge which was built for that work restored the channel at much less expense than we expected, so that we have considerable funds on hand, which are considered sufficient for the next fiscal year.

The CHAIRMAN. San Pablo Bay to Mare Island.

Col. NEWCOMER. That is the work which was authorized last session provisionally, if required for naval needs. It was then expected that some additional depth would be needed up to the navy yard, but the naval commission appointed has reported adversely upon the proposition of any greater depth than 30 feet.

Mr. OSBORNE. Isn't that somewhat dependent upon the Helm naval-defense proposition?

Col. NEWCOMER. They have made their report.

Mr. OSBORNE. The question is whether it will be adopted by Congress.

Col. NEWCOMER. They are proposing to have a base in San Francisco Bay, where they have deep water.

Mr. OSBORNE. I know. We are trying to get it up in this Congress, but whether we are going to be able to do it or not I don't know.

Col. NEWCOMER. I understood that the Navy Department was opposed to doing this work up here. The appropriation is there, available for that if it is decided to deepen the channel.

The CHAIRMAN. There is \$330,000 available now.

Mr. OSBORNE. I know.

The CHAIRMAN. Suisun Channel, Cal.

Col. NEWCOMER. A balance of about \$8,000 is what we have, and that is considered sufficient for the next fiscal year.

The CHAIRMAN. Napa River.

Col. NEWCOMER. In that case also the available funds, nearly \$12,000, are sufficient for the maintenance and operation of the existing project.

The CHAIRMAN. Petaluma Creek, Cal.

Col. NEWCOMER. There we have a balance of about \$22,000, which is sufficient for the present project. Both of these items, Napa River and Petaluma Creek, are places where additional improvements have been recommended, which were included in the bill a couple of years ago and were later dropped out.

Mr. OSBORNE. There is quite a commerce there.

Col. NEWCOMER. Yes.

Mr. OSBORNE. It amounts to something like \$16,000,000. Mr. Lea was speaking to me about that. He has spoken to you about that, too, I believe.

Col. NEWCOMER. He has spoken to me about it; yes. We have just submitted a report of the survey on that creek which will reach Congress in the near future.

The CHAIRMAN. Monterey Harbor, Cal. There is no estimate made for that.

Col. NEWCOMER. In that case an appropriation was made by the Government of \$200,000 for the work to be undertaken contingent upon certain local cooperations. The required contribution by the local interests was appropriated by the State. That was one part of the local cooperation required. The other was assurance satisfactory to the Secretary of War that a railroad would be built from the San Joaquin Valley, because it was felt that only by tapping the San Joaquin Valley would this harbor be justified. That latter condition has not as yet been satisfied. There has been no assurance which the Secretary of War has considered satisfactory concerning the construction of that railroad.

The CHAIRMAN. Humboldt Harbor and Bay, Cal. It is divided into two items of improvement, rebuilding the jetties, and channel in front of Eureka, but no estimate was made for either one of those sections of the improvement.

Col. NEWCOMER. We have there abundant funds on hand to take care of the maintenance and for the work during the next fiscal year. The work on the jetties has been suspended on account of the great increase in the cost of material. The jetties are, in fact, in satisfactory condition, so that it was felt that further prosecution of the work at this time was inadvisable.

Mr. OSBORNE. Are you doing any work on that bar?

Col. NEWCOMER. Nothing on the bar.

Mr. OSBORNE. It is a rough bar.

Col. NEWCOMER. Yes; it is.

The CHAIRMAN. There will be brought to the attention of the committee a letter—I mention it now because we are in this district—on the matter of the new project for Crescent City Harbor, Cal., where the local interests are to contribute.

Mr. FREAR. To go into this bill?

The CHAIRMAN. It is for consideration with this bill; it involves no appropriation.

Mr. FREAR. It does not involve any appropriation?

The CHAIRMAN. No; Mr. Lea came before the committee on that.

Mr. FREAR. Do they put up all the money that is necessary?

The CHAIRMAN. They put up all that is necessary now—\$200,000. There is no appropriation in this bill for it.

Mr. OSBORNE. Crescent City Harbor would open a wonderful country.

Mr. FREAR. How do they get their appropriation—from the Government?

The CHAIRMAN. No; they are willing to put in there \$100,000 additional, making \$200,000, which will be sufficient for the work. The whole cost will be what?

The CLERK. It will be \$490,000.

Mr. FREAR. They put in \$200,000 at this time.

The CHAIRMAN. Yes.

The CHAIRMAN. The third San Francisco district. The first item, page 46, is Mokelumne River, Cal., \$500 for maintenance.

Col. NEWCOMER. That is for snagging and keeping the channel clear.

The CHAIRMAN. The tonnage in the river is not very high. The next item is \$10,000 for Sacramento River, for maintenance. Is that a sufficient sum there?

Col. NEWCOMER. That, in addition to the available funds, is considered sufficient for two years. It costs about \$50,000 a year to operate the plant for snagging and keeping in repair the channel works. We have \$90,000 on hand, and \$10,000 additional is needed for the two years.

The CHAIRMAN. In that group there are no estimates for appropriations for Stockton and Mormon Channel and Fremont Channel and McLeod Lake.

Col. NEWCOMER. Part of that is in the San Joaquin River.

The CHAIRMAN. Yes.

Col. NEWCOMER. We have a balance of about \$32,000 for the items you mention and about \$112,000 for the main channel in the river itself. Those funds are considered sufficient for the coming fiscal year.

The CHAIRMAN. For both sections of the work?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. Feather River, Cal. There is no estimate.

Col. NEWCOMER. We have there sufficient funds to provide for the work. That is a case where only a small amount of work was authorized, the local interests cooperating. It is not apparent that we will need anything further.

(Whereupon, at 1.15 o'clock p. m., the committee adjourned until 10.30 o'clock Wednesday, January 16, 1918.)

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 16, 1918.

The committee met at 10.30 a. m. After concluding hearings on the Cumberland River improvement, the committee resumed the hearings on the estimates.

**STATEMENT OF COL. H. C. NEWCOMER, CORPS OF ENGINEERS,
UNITED STATES ARMY—Continued.**

The CHAIRMAN. We will now proceed with the consideration of the report of the engineers upon the bill. We will first take up the first Portland, Oreg., district, the first item there.

Mr. OSBORNE. Before we leave the San Francisco district, I want to inquire of Col. Newcomer if the people of these various localities are pressing for anything further.

Col. NEWCOMER. In the first San Francisco district there are several localities where no funds are required. Of course, no estimates are submitted for them. There are also several localities where projects have been recommended, but no estimates are submitted because they are not yet authorized by Congress.

The CHAIRMAN. What districts?

Col. NEWCOMER. They are principally Redwood Creek, Napa River, and Petaluma Creek. There is also a new project urged up there for Suisun Bay. These would be all new projects, which, of course, can be considered by the committee when they come to that subject.

The CHAIRMAN. Anything more, Captain?

Mr. OSBORNE. That is all. There is nothing in the third district?

Col. NEWCOMER. No, sir.

The CHAIRMAN. Recurring to the first Portland, Oreg., district, the first item there, for which an estimate for appropriation is made, is Coos Bay, Oreg., which is an estimate of \$40,000 for further improvement, including maintenance. I would be glad to hear from you as to that, Colonel.

Col. NEWCOMER. That is the amount that is estimated that is necessary to provide for the operation of the dredge *Michie*, which is used at Coos Bay to provide a channel across the bar. That amount, with the funds on hand, is considered sufficient to last through the next fiscal year, as well as for the present one. That is substantially all for maintenance.

The CHAIRMAN. That is the only estimate for appropriations for any improvement in the first Portland, Oreg., district. I will now direct your attention to the several improvements there for which no estimate is made, with a request for reasons why estimates were omitted. Coquille River, Oreg., has no estimate.

Col. NEWCOMER. We have there a balance of a little over \$45,000 remaining, principally from the appropriation for jetty work, which has been completed, and this sum is considered sufficient to take care of the work for the next year.

The CHAIRMAN. There is no estimate for Coos River, Oreg.

Col. NEWCOMER. The balance there, of about \$6,000, is considered sufficient for the next fiscal year.

The CHAIRMAN. There is no estimate for Siuslaw River, Oreg.

Col. NEWCOMER. There we have a balance of nearly \$17,000, which is sufficient to provide for the urgent needs for the next year.

The CHAIRMAN. Yaquina River has no estimate.

Col. NEWCOMER. We have a small balance there, \$3,000, which is considered sufficient for the existing project. Of course, my remarks in all these cases refer to existing projects. At several of these points additional work is desired by local interests, but in all cases they would constitute new projects.

The CHAIRMAN. There is no estimate for Tillamook Bay and Bar, in Oregon.

Col. NEWCOMER. In that case there, there is a balance of \$66,000 available for the fiscal year 1918, and that will suffice also for the next fiscal year.

The CHAIRMAN. There is no estimate for Nehalem River, Oreg.

Col. NEWCOMER. There is a balance of \$42,000, which is sufficient for the two fiscal years.

The CHAIRMAN. In the next group in this district for which no estimate is made is the Cascades Canal and Columbia River, Oreg.

Col. NEWCOMER. That work is about complete. There is a balance remaining of \$8,000.

The CHAIRMAN. There is no estimate for The Dalles-Celilo Canal, in Oregon.

Col. NEWCOMER. There is no estimate. The canal is now being maintained under the indefinite appropriation for operating and care.

The CHAIRMAN. I note the balance available on July 1. Does your statement imply that that balance will not be used for the purpose of maintenance?

Col. NEWCOMER. It will not be used for maintenance. It was appropriated for construction and the maintenance is adequately taken care of by the indefinite appropriation. It appears that while the main work is complete and is being operated there is still some excavation of a lower canal entrance in order to provide the full project depth, and there are a few items, such as payment for right of way, which will require a portion of that fund. There will probably be an unexpended balance after the entire completion.

The CHAIRMAN. There is no estimate for the Columbia River and tributaries above Celilo Falls to the mouth of the Snake River.

Col. NEWCOMER. There we have a balance of \$49,000, which is considered sufficient for operating the plant and taking care of the channel, which consists mainly in the removal of bowlders in the shoal places in the river.

The CHAIRMAN. There is no estimate for Snake River, Oreg., Wash., and Idaho.

Col. NEWCOMER. There we have a balance of over \$29,000, which is considered adequate for the next year.

Mr. OSBORNE. Col. Newcomer, may I make an inquiry? You mention some places where they are asking for new projects. What places are those?

Col. NEWCOMER. Mr. Hawley, as you will recall, came before the committee and submitted a list of those. There is Coquille River, which is covered by a report in House Document No. 70, Sixty-fifth

Congress, first session; there is a new project for the inner harbor at Coos Bay, covered by House Document No. 325, Sixty-fifth Congress, first session; and a new project for Siuslaw River, given in House Document No. 173, Sixty-fifth Congress, first session.

Mr. OSBORNE. May I ask a question right there in regard to that project?

The CHAIRMAN. Better let him complete his statement. There are others?

Col. NEWCOMER. One or two others.

The CHAIRMAN. Suppose you let him complete them and then you may recur to the points you wish to take up.

Mr. OSBORNE. Very well.

The CHAIRMAN. Go ahead, Colonel.

Col. NEWCOMER. Yaquina Bar and Harbor, covered in House Document 179, Sixty-fifth Congress, first session. That is all, along the coast there. He also mentioned a new project in the Clatskanie River, in House Document 698, Sixty-fourth Congress, first session.

Mr. OSBORNE. I notice in this report on the Siuslaw that there is a small amount on hand, and I notice that the people there contributed \$328,000.

Col. NEWCOMER. Yes, sir. They contribute 50 per cent to the construction of the jetties.

Mr. OSBORNE. They ask there for an increase of \$35,300, I believe. I just wanted to call attention to the fact that the only money they have is practically and properly their own money.

The CHAIRMAN. We will now take up the second Portland, Oreg., district; the first item being an estimate for \$250,000 for the further improvement and maintenance of the Columbia and lower Willamette Rivers, below Vancouver and Portland.

Col. NEWCOMER. That item is for the operation of the dredges principally, for the maintenance of the 30-foot channel from Portland to the mouth of the Columbia. We consider that the amount on hand will provide sufficient money for maintenance this fiscal year and also for the construction of some of the training works. We will need a number of training works there for the preservation of the channels. This \$250,000 does not provide for the continuance of such construction for the next year. We thought it would suffice to provide only the funds necessary for the operation of the dredges.

The CHAIRMAN. Is that depth from Portland to the sea being fairly well maintained?

Col. NEWCOMER. I do not think they have actually been able to maintain more than 27 feet so far, but the channel has been practically secured at most points. It fills up rapidly at freshet stages at a number of points and has to be dredged continuously.

The CHAIRMAN. That is the only estimate in that group. We come now to the second group in the second Portland, Oreg., district, and the first estimate of that group is of \$1,000 for the Clatskanie.

Col. NEWCOMER. That is the estimated amount necessary in addition to the available balance for the maintenance of the existing project for the next two years. Of course it does not provide for the new project.

Mr. DUPRÉ. What is that?

Col. NEWCOMER. That is a case where they want one or two cut-offs, and a slight extension is desired so as to reach up to the town of Clatskanie.

The CHAIRMAN. The next item for which an estimate is made is for the Lewis River, Wash.; \$4,500 for maintenance and \$18,500 for further improvement.

Col. NEWCOMER. That is the sum estimated as an advantageous expenditure for the next fiscal year for the maintenance and the prosecution of the existing project, which provides for dredging and for construction of some training works for the protection of the channel. It provides substantially the same sum for next year that we have for this year.

The CHAIRMAN. The next item for which an estimate is made for an appropriation is the Cowlitz River, \$6,000 for maintenance.

Col. NEWCOMER. That is necessary for the work of dredging and maintenance of the works and dikes of that river for the fiscal year. We made an allotment there of \$5,000 from the cash balance that was left from the 1915 lump-sum appropriation for the work of repairing the dike which was destroyed by a flood.

The CHAIRMAN. The next estimate is for \$500 for Grays River, Wash.

Col. NEWCOMER. That is the annual amount required for the snagging of the river.

The CHAIRMAN. Now, as to the several improvements in the second Portland (Oreg.) district, for which no estimate is made; the first one is Columbia River at the mouth, Oregon and Washington.

Col. NEWCOMER. There we have quite a substantial balance of \$323,000 on hand; that is sufficient to provide for the operation of the dredge which is used on the bar at the mouth of the Columbia River. The jetty work there has been discontinued with the understanding that possibly nothing further would be required.

The CHAIRMAN. There is no estimate for an appropriation for Willamette River above Portland and Yamhill River, Oreg.

Col. NEWCOMER. We have in that instance \$250,000, which is considered sufficient for the two fiscal years.

The CHAIRMAN. There is no estimate for the Willamette River at Willamette Falls, Oreg.

Col. NEWCOMER. At its last session Congress appropriated sufficient funds for the completion of the necessary changes in the canal at those falls, which the Government has recently purchased. We have sufficient funds on hand there for the necessary work.

The CHAIRMAN. If there are no further inquiries regarding this district—

Mr. OSBORNE. I wanted to ask the Colonel if there were any estimates made for new projects here.

Col. NEWCOMER. Well, there are several. I think, along the Columbia River. One is Lake River and Bachelors Slough, Wash.; that is a tributary water of the lower Columbia. This list does not have all that we have recently considered. I know one at Astoria, a project has been considered. I think there was an unfavorable report upon it. There was also a report with reference to a point on the Columbia River which is below the mouth of the Willamette Slough; at St. Helens they want some work done there. In that case the report was adverse to the project.

Mr. BOOHER. You say it was adverse to the improvement at Astoria?

Col. NEWCOMER. Yes, sir.

Mr. BOOHER. What did they want there?

Col. NEWCOMER. They wanted a channel into Youngs Bay, which extends back of Astoria. At St. Helena they wanted a deeper channel to the town front across a shoal which obstructs the approach. The depth on the shoal is about 19 feet and they want 24 feet. I do not now recall any favorable report for an additional improvement, Captain, in that district, except the one that I first mentioned, given in Mr. McGann's list, and the one at Clatskanie.

The CHAIRMAN. We now take up the Seattle (Wash.) district. There do not appear to be any estimates of appropriation either for maintenance or further improvement of any of the improvements in that district.

Col. NEWCOMER. I would like to suggest one, however, Mr. Chairman.

The CHAIRMAN. Certainly.

Col. NEWCOMER. It is an item for Puget Sound and its tributary waters, Washington, in the second group. We just had a report from the district engineer that the snag boat which was built for that work was sunk by striking a pier of the railroad bridge while coming down the Skagit River. The cost of raising that boat and repairing it makes it necessary to ask for an appropriation that we did not anticipate. I suggest an appropriation of \$10,000 for that work.

Mr. OSBORNE. What item is that?

Col. NEWCOMER. Puget Sound and its tributary waters, the leading item in the second group.

The CHAIRMAN. To be used for the purpose of raising a sunken boat?

Col. NEWCOMER. Yes; and repairing it. It was a little questionable whether the amount on hand was enough, anyhow, but I thought we could probably get along. Under present conditions, however, I think this additional sum of \$10,000 is needed.

Mr. OSBORNE. These items that Mr. Hadley brought to the attention of the committee, what about them?

Col. NEWCOMER. Those, as I recall now, were the Skagit River, some additional improvement, and the Anacortes Harbor. The Skagit River is under improvement now, but the Anacortes Harbor would be altogether a new project. The work desired on the Skagit River is some contraction work at a point where the shoals form persistently, and they want additional depth maintained by this work. The river there overflows the surrounding lands during flood stages except as it is kept off the land by the construction of levees. They have built these levees and they are quite close to the bank. It was felt that the building of some training dikes in the river might possibly lead to some attack on the banks, so the condition was made that the local interests would be responsible for the maintenance of the levees.

The CHAIRMAN. We will now recur to those improvements in the Seattle, Wash., district, for which no estimate is made, for the purpose of securing a statement from the Colonel of the reasons therefor.

Col. NEWCOMER. The first is Willapa River and Harbor, Wash. We have in that case practically \$126,000, which is considered sufficient for the two fiscal years.

The CHAIRMAN. There is no estimate of appropriation for Grays Harbor and Bar entrance, Wash.

Col. NEWCOMER. In that case you will recall Congress has adopted a project for the maintenance of the entrance channel by dredging; that involves providing a dredge for that point, but the present shipping conditions are such that it was not advisable to construct a dredge at this time, so Congress authorized the use of another dredge for that work, and we have sufficient money for that purpose. The money on hand will suffice for the operation of the Government dredge that can be borrowed for the work.

The CHAIRMAN. There is no appropriation for Grays Harbor, inner portion, between Aberdeen and the entrance to said harbor and Chehalis River, Wash.

Col. NEWCOMER. There we have a balance of \$8,000, which is considered sufficient. It is mostly used in inspection and supervision and surveys.

The CHAIRMAN. There is no estimate for Hoquiam River, Wash.

Col. NEWCOMER. We have a small balance on hand there of \$1,365, which is considered adequate for the next year also.

The CHAIRMAN. Now, coming to the next group of Seattle, Wash., district, there is no estimate for the waterway connecting Port Townsend Bay and Oak Bay, Wash.

Col. NEWCOMER. That work is in fair condition or will be placed in fair condition with the funds on hand, so that it is not estimated that any additional appropriation will be required during the next fiscal year.

The CHAIRMAN. There is no appropriation for Olympia Harbor, Wash.

Col. NEWCOMER. The funds on hand there are considered sufficient for the next fiscal year. I might state that Olympia Harbor is a place where they desire additional improvement, but it has not been recommended yet.

The CHAIRMAN. There is no appropriation for Tacoma Harbor.

Col. NEWCOMER. The balance of \$5,600 is sufficient for the next fiscal year.

The CHAIRMAN. Two fiscal years?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. The waterway connecting Puget Sound with Lakes Union and Washington, there is no estimate.

Col. NEWCOMER. That is the Lake Washington Ship Canal, where we have a balance of \$413,000, which we consider sufficient for the work urgently needed. That is deepening the entrance to the lock which has been built by the Government and the possible construction of some revetment along the canal banks above the lock, where the channel was constructed by local interests. It was estimated that quite extensive revetment would be required but since filling the canal it has been found that it would be much less than anticipated.

The CHAIRMAN. That is a work in which there is a large amount of local contribution?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. I was much impressed last night in reading the report sent out by the National City Bank of New York, in which they refer to the utility of that waterway.

Mr. OSBORNE. What is the depth of water in the canal?

Col. NEWCOMER. Twenty-five feet was the required depth, but they have actually provided 30. It was anticipated that 30 would be provided eventually, but the local interests thought that it should be provided at once.

The CHAIRMAN. There is no estimate for the Snohomish River, Wash.

Col. NEWCOMER. We have a balance of about \$28,000, which is deemed sufficient for the work necessary for the next fiscal year, as well as this.

The CHAIRMAN. There is no estimate for the Skagit River.

Col. NEWCOMER. We have there a balance of about \$20,000, which is deemed sufficient for the project in the next fiscal year.

The CHAIRMAN. There is no estimate for the Swinomish Slough.

Col. NEWCOMER. We have a balance there of more than \$5,000, which is deemed sufficient for the present.

The CHAIRMAN. There is no estimate for Bellingham Harbor.

Col. NEWCOMER. There is no estimate necessary there. The funds are practically exhausted, but there is no present need for work.

The CHAIRMAN. There is no estimate for Columbia River between Wenatchee and Kettle Falls, Wash.

Col. NEWCOMER. All the work that has been deemed advisable on that part of the river has been accomplished, and we do not consider any further work necessary at this time.

The CHAIRMAN. I see there is no data as to the commerce on that improvement.

Col. NEWCOMER. There is very little, if any, commerce on that. It is a detached section of the Columbia River.

The CHAIRMAN. Now, there is no estimate for the independent projects of Polson Bay, and Flathead Lake, Mont.

Col. NEWCOMER. No work is necessary at this time on that improvement.

The CHAIRMAN. There is no estimate for the two projects grouped for Alaska, Apoon mouth of Yukon River, Alaska.

Col. NEWCOMER. The work authorized by Congress at its last session at the Apoon mouth of Yukon River has not yet been undertaken. It was estimated to cost \$45,000. The district engineer has submitted a report indicating that it would be inadvisable to undertake that work now because it is found that the shoal is so long and the cost of removal of this crest, which extends for a couple of miles, is so great, especially on account of the necessity of digging so far and dredging so deep to provide for the draft of the dredge itself, and with so little benefit to traffic, that the work probably should be abandoned. The matter has been brought to the attention of the navigation interests that use that channel, and also to the attention of the Delegate from Alaska, and without any objection on their part so far, at least for an indefinite postponement of the work, so that work will probably not be done.

The CHAIRMAN. I believe we adopted a new project there?

Col. NEWCOMER. Yes; that is it; a new project estimated to cost \$45,000.

The CHAIRMAN. And the inadvisability of prosecuting that new project is now under consideration, as I understand it?

Col. NEWCOMER. Yes, sir.

The CHAIRMAN. And therefore you make no estimate?

Col. NEWCOMER. We make no further estimate. The amount appropriated was the entire amount estimated to complete it, but it is thought perhaps inadvisable to expend any portion of that sum.

The CHAIRMAN. There is no appropriation for Nome Harbor, Alaska.

Col. NEWCOMER. That project was in the last act, and the appropriation of \$105,000 was the amount estimated to complete the work. The work has not yet been begun, as the season up there is very short. Specifications are now prepared with a view to asking for bids for the work this next season.

The CHAIRMAN. Are there any further inquiries regarding the improvements in the Seattle, Wash., district?

Mr. OSBORNE. I would like to ask the colonel if, besides the two projects asked for by Mr. Hadley, there are any other projects in that district?

Col. NEWCOMER. There are several favorable reports before Congress in connection with work that will be handled by this district; one, I recall, is Dry Straits, Alaska. A favorable report has been made there for providing an inside channel on the route from Seattle to Alaska, at Dry Straits, Alaska, upon which Congress has not yet acted. And then at Seattle there is also an urgent request being made for improvement of a part of the harbor in the Sound; that, however, is not before Congress in any form yet. There are two favorable reports for points on Puget Sound that I recall, but I forget the names just at present.

Mr. OSBORNE. Is Heverick one of them?

Col. NEWCOMER. No, sir.

Mr. OSBORNE. You might add that later.

Col. NEWCOMER. Yes; I can have a full list of these points, of course, upon which reports have been submitted to Congress, and where they have not yet been adopted.

Mr. OSBORNE. I would be glad if you would. I wanted to ask about the Yukon River—if you have done anything in the Yukon?

Col. NEWCOMER. Yes, sir.

Mr. OSBORNE. I mean above the mouth?

Col. NEWCOMER. No, sir; only near the mouth.

The CHAIRMAN. We now take up the Honolulu, Hawaii, district, which are all comprised in one group, and for which no estimates for appropriation are submitted. I will mention each improvement there and ask why no estimate was made. The first is Honolulu Harbor.

Col. NEWCOMER. We have a balance of \$104,000, which is considered sufficient for the present need in that case.

The CHAIRMAN. That is on the project adopted in the River and Harbor bill of August 8, 1917, to be applied to that?

Col. NEWCOMER. Yes, sir. The present situation about the completion of the former project over there is not wholly satisfactory. We had made a contract at a very low price; that is, a price that was very satisfactory to the Government for the making of the excava-

tion required in the main harbor; providing for 35 feet. The contractor has never yet gotten a dredge on the site, and the work for the quarantine site was so urgent that we had to let that part of the work to another contractor at a price considerably in excess of the contract price. Just what we will be able to do in completing that work has not developed yet, but the harbor is in fair condition for the present needs. We think the funds we have on hand will suffice for that.

Mr. OSBORNE. I believe the contract price was about one-half of what it actually cost?

Col. NEWCOMER. The contract price was in the neighborhood of 24 cents. The next lowest bid was 53 cents. There were only two bidders.

The CHAIRMAN. There is no estimate for an appropriation for Kahului Harbor, Hawaii?

Col. NEWCOMER. We have a balance of \$35,000, which is sufficient for the work in Kahului Harbor. It is expected that the funds already provided will suffice for the completion of that breakwater. There is an unappropriated balance of about \$50,000 of contract authorization which we will not ask for.

The CHAIRMAN. It appears that on July 1 no work was done on the project adopted in the act of July 27, 1916.

Col. NEWCOMER. That is true.

The CHAIRMAN. Has any been done since that time?

Col. NEWCOMER. The contract has now been made. The Honolulu office is so far from headquarters it takes a good deal of time to get the specifications and plans back and forth. There was some discussion as to the location of that breakwater at Kahului Harbor, but finally the work was advertised and the contract made at a very favorable figure which will complete the breakwater at considerably less than the estimated cost.

The CHAIRMAN. The amount available, then, is considered sufficient?

Col. NEWCOMER. Yes; to complete the project and for necessary maintenance during the next year.

The CHAIRMAN. There is no estimate for appropriation for Hilo Harbor, Hawaii.

Col. NEWCOMER. We have there a balance of about \$163,000 for the prosecution of work on the breakwater. It is doubtful whether we can make any favorable contract with that sum. It is too small to justify a contractor in providing a plant. The original contractor for the breakwater failed, and his contract was completed by the bonding company. They do not wish to remain on the work. They disposed of their plant, and it is probable that we can not get any further favorable figures until we advertise the entire work required to complete that breakwater. I doubt whether it is advisable to do that under present conditions. The breakwater has already been extended sufficiently to furnish considerable protection for the harbor, and while its completion may be justified, we do not feel that we care to ask for it at this time, on account of the high cost of getting a plant over there.

Mr. OSBORNE. Is that the harbor in which there is so much trouble to land?

Col. NEWCOMER. Nawiliwili Harbor, I think, is the place you have so much trouble in landing—not here.

Mr. OSBORNE. Has there been any report on that place?

Col. NEWCOMER. Yes; there is a report there.

Mr. OSBORNE. Is there any other report as to the Hawaiian Islands except that one?

Col. NEWCOMER. I think that is all.

The CHAIRMAN. The committee have felt as to those islands that they deserve special consideration, particularly not being represented on the committee, and if Col. Newcomer is prepared to answer the question now I will ask if the adoption of that new project for Nawiliwili Harbor is regarded in connection with the activities either of the War or Navy Departments as any aid in the prosecution of the war?

Col. NEWCOMER. It is not one, in my judgment, that would bring it within the class that we adopted last year as a war measure; it is, rather, in the class of those that we excluded at that time as being of commercial importance and worthy under ordinary conditions but hardly warranted at this time.

The CHAIRMAN. The primary purpose for the improvement at this time of that harbor is commercial?

Col. NEWCOMER. Yes; to give greater convenience in handling the products of the island of Kauai. There were a couple of harbors considered on that island, and Nawiliwili is the one recommended for improvement. That is given in House Document 609, Sixty-second Congress, second session. You will see it was made some time ago; in fact, the report was made in 1912.

The CHAIRMAN. We will now take up the Porto Rico district. There is no estimate of an appropriation made for San Juan Harbor?

Col. NEWCOMER. The amount appropriated for the new project adopted at the last session of Congress is sufficient to carry on the work for the next fiscal year. The work has not yet begun. It is a question whether we can do it favorably by contract, or possibly better by the purchase or construction of a dredge. But in either case the amount provided is considered sufficient for the next year.

The CHAIRMAN. I believe there is no new project which has been submitted for the improvement of that harbor in Porto Rico?

Col. NEWCOMER. No, sir; we just adopted the one—one moment; I think there is a new project recommended across the bay from San Juan.

The CHAIRMAN. Catano Bay?

Col. NEWCOMER. Yes; it is one of the suburban places, where there is a good deal of passenger traffic, and they want some improvement.

The CHAIRMAN. That is House Document 482, Sixty-fourth Congress, first session. Do you regard the improvement in that new project as essential during the pendency of the war?

Col. NEWCOMER. I would hardly put it in the essential class.

The CHAIRMAN. Now, the California Débris Commission. Will you kindly make a statement as to the status of that and the work of this committee to the work of that commission?

Col. NEWCOMER. The funds provided for its operations are all carried in the sundry civil bill. The California Débris Commission, in the first place, has general charge of the subject of hydraulic

mining, and an appropriation of \$15,000 has been made to provide for the necessary supervision of hydraulic mining. They are now asking for an appropriation of \$18,000 for the increased activity in that work. And then comes, of course, the flood-control work, which was authorized in the act of March 1, 1917, which also comes under the California Débris Commission. The money for that is provided in the sundry civil bill.

The CHAIRMAN. Neither one of those activities come within the jurisdiction of this committee at this time?

Col. NEWCOMER. No, sir; not at this time.

The CHAIRMAN. I notice an estimate of \$300,000 has been made for examinations, surveys, and contingencies of rivers and harbors; will you kindly express an opinion as to the sufficiency of that appropriation?

Col. NEWCOMER. That was the amount, when we prepared the estimate, that seemed to be advisable to meet the ordinary demands on that item. I have thought since then that possibly it would be well to increase that sum materially in view of the very extensive reductions that have been made in the estimates that the district engineers submitted. We attempt, of course, to provide what we think is essential to take care of the current needs of navigation, but it is quite possible that in some cases the reductions were excessive, and it would be quite well to have a fund such as this that would take care of the current needs. There is, however, this to be said: That we still have a balance of about \$800,000 from that lump sum appropriation of March 4, 1915, which is subject to allotment for any work.

Mr. BOOHER. Wouldn't that be sufficient?

Col. NEWCOMER. It possibly will with this amount. I think it would be advisable, however, to increase this item to \$500,000 so as to give us about a million dollar margin over the ordinary needs for this item. It may be well to bring to the committee's attention that some of the items which it included in the list of examinations and surveys probably involved considerably more expense than it anticipated. For instance, you put an item in the act of 1916 which calls for a survey—not a preliminary examination and survey—but a survey of St. Francis River with a view to providing a channel and taking care of the flood waters, etc. That has already involved an allotment of \$60,000 to make that survey. The last act of 1917 had a survey of Black River, Ark., with a view of taking care of the flood waters. An estimate has just come in from the district engineer of \$77,000 as the amount required for that survey. In other words, these flood investigations are of such an extensive character, cover so much territory, including the entire watershed, and especially detailed examination of reservoir sites, which are not usually considered when it is merely a question of navigation, that I think it is very dangerous to call for a survey unless you know what it is going to cost.

In all cases where this committee has called for an examination and survey on such propositions we have looked into the matter to find out what the general situation is, what the probable method of protection would be, and we have prepared estimates of what the full investigation would cost in order to prepare complete plans for full flood control, and then it is sent to Congress and then either

this committee, or more properly the Flood Control Committee, I presume, would take that up and find out whether the Government should go to the expense of a full survey. Of course, where a survey is ordered we have no discretion, but must go ahead, regardless of cost, a cost that is often not justified by the navigation interests. It may be a cost that is well justified in view of other interests, the protection of property, etc., but not from the navigation standpoint.

The CHAIRMAN. Colonel, some inquiry may be made in the House as to the uses to which this general appropriation of \$300,000 for examination, surveys, and contingencies of rivers and harbors was made; will you kindly explain the uses made of that general appropriation as interpreted by the department?

Col. NEWCOMER. That provides, of course, primarily for the examinations and surveys authorized from year to year, and in connection with that not only the expenses of the district office and field operations, etc., but of the board of review—the Board of Engineers for Rivers and Harbors; and, in addition to that, it pays such expenses as the printing—no; it used to pay for the printing of the annual report, but that is now carried as an item of printing in the War Department, I think. There is a considerable roll of employees in the office of the Chief of Engineers, which is called the allotment roll, as distinguished from the statutory list of positions which are appropriated for individually. We are authorized to employ up to a certain sum, \$50,000, which is handled from this fund; and then, of course, any other contingency which comes up for which we have no other fund can be handled out of this. The most of it, far the greater part of it, goes to the examinations and surveys.

The CHAIRMAN. If you should have any occasion to recommend any change in this estimate of \$300,000 for examinations, surveys, and contingencies of rivers and harbors, will you advise the committee?

Col. NEWCOMER. Well, I will say now that I think it would be well to make that \$500,000, if the committee is willing. Now, if you will permit me, Mr. Chairman, I would like to call attention to one or two items where reports have been received from the district engineer indicating that a small additional amount should be appropriated. One of these is Little Rock district, Little Rock, Ark. The first is in the Vicksburg district.

Mr. BOOHER. What page is that?

Col. NEWCOMER. Page 30. I think I called attention to the \$15,000 for the Yazoo River.

The CHAIRMAN. Yes.

Col. NEWCOMER. The next is Little Rock, Ark., page 31. There we need an additional item of \$1,000 for Current River, Ark. and Mo., and \$4,000 for the St. Francis and L'Anguille Rivers and Blackfish Bayou, making \$5,000 for that group.

The CHAIRMAN. The \$5,000 is for the Current River and St. Francis and L'Anguille Rivers?

Col. NEWCOMER. Yes, sir. That will probably be sufficient by making some redistribution of the balance on hand for that group. We find, for instance, that the White River has more than it needs, and we can divert some of that to the other streams, but we would still

need the amount of \$5,000 estimated for those two rivers. I guess that is the only one I have not mentioned before.

The CHAIRMAN. I would like to direct your attention to the improvement of the Livingstone Channel, Detroit River, Mich. An urgent telegram has been received by the chairman from Mr. Livingstone, of Detroit, who is president of the Lake Carriers' Association, asking for the status of that improvement, and I will ask you kindly to give the status of that improvement under existing projects; also, what is proposed in the new project, and any recommendation, if you are prepared to do so, as to the urgency of the new project. Do you prefer to make a statement of that later?

Col. NEWCOMER. Just as you say.

The CHAIRMAN. Are you prepared now?

Col. NEWCOMER. Yes; I think so.

The CHAIRMAN. I think, in view of this urgent request, we will ask the Colonel for an expression now.

Mr. OSBORNE. On what page is that?

Col. NEWCOMER. Page 41 of your committee book. It is a channel in Detroit River known as Livingstone Channel. That channel has a depth of 22 feet and a width of only 300 feet for a portion of its length and another place a width of 450 feet. It is a case where two channels are provided, one for the upstream traffic and one for the downstream traffic. This narrow place in the Livingstone Channel for the downstream traffic is in a rock cut and there are cross currents sometimes which make it difficult to control boats, and they feel a widening of that channel is very much needed. An estimated cost of the work proposed is \$2,570,000. That matter has been investigated and has been reported upon favorably, the chief of engineers recommending a widening of the rock cut to 450 feet throughout—part of it is now 450 feet—and deepening to 22 feet and widening to 800 feet the two-and-one-half-mile section lying west of the Detroit River Light. The latter is really not a part of the Livingstone Channel proper, but is an extension of it into Lake Erie—that is, coming into the lake—where it is felt a greater width and depth are desirable.

The question of the urgency of that is one that does not appeal to me as being essential as a war measure. We have already provided, of course, very materially increased facilities by the construction of the Livingstone Channel at a high cost. While this additional improvement is doubtless a desirable one I question whether it comes within the class of those that should be adopted as a war measure. Of course, the traffic on the lakes is so tremendous that every reasonable provision should be made for that traffic.

Mr. OSBORNE. Did they ever have any accidents there?

Col. NEWCOMER. I don't think the accidents there have been serious. They have had a few boats striking the side of the channel, I think, but no serious accidents. They feel there is a possibility of it, even to the extent of blocking the channel. If a boat should get out of control and block the channel they would then have to send the traffic through the other channel for both upstream and downstream boats.

Mr. OSBORNE. It is a narrow channel, and has a tremendous amount of traffic at times during the navigation season?

Col. NEWCOMER. There is a great deal of traffic. Here and up at the Soo there is tremendous traffic.

Mr. BOOHER. Isn't this a wider channel than at Buffalo?

Col. NEWCOMER. Oh, yes; a wider channel.

Mr. BOOHER. While you think it desirable you hardly think it comes within the essential war measures?

Col. NEWCOMER. It hardly appeals to me as that.

Mr. OSBORNE. They have to bring down all the iron ore destined to Lake Erie ports that way?

Col. NEWCOMER. Yes, sir. Understand me, of course, I do not wish to cast any doubt on the desirability of the improvement at all, but simply its advisability as a war measure I question at this time.

(Thereupon the committee adjourned to meet at the call of the chairman.)

APPENDIX A.

[Telegram from Mr. John Sealy, president, to Col. Walter Gresham, relative to the ownership and operation of the Galveston Wharf Co.]

GALVESTON, TEX.. February 21, 1918.

Col. WALTER GRESHAM,
Care New Ebbitt House, Washington, D. C.:

Report of hearing before Committee on Rivers and Harbors relative improvement of Galveston Harbor and of your argument before said committee just received by us. You should state to committee that the Galveston Wharf Co. is a private corporation in which one-quarter of the stock and one-third of the property is owned by the city of Galveston. Our tracks connect with all trunk lines entering this section of the country and we are in position to connect with any other new lines coming into this territory; but our company is entirely independent of any of said lines, none of our stock being owned or controlled by said trunk lines. We operate as a common carrier, furnishing same facilities to all railroads connecting with us, and our wharves and elevators are public wharves and elevators, although operated by us. Any concern desiring warehouse, elevator, or wharfage facilities can obtain same from us on same basis as others now doing business with us. Our company has no interest in any steamship lines doing business at our wharves, but we furnish to all ships equal facilities, and any new shipping concern will be cared for on same basis and at same charges as those now doing business here. Our tariffs of railroad, wharfage, and elevator charges are filed with the Texas State Railroad Commission and also with the Interstate Commerce Commission, covering all intrastate, interstate, and foreign movements. No changes in our tariffs can be made or new rates promulgated without consent of both of said commissions, and any new tariffs must be filed with them. Please see that these facts are put into records of committee in some permanent way by presentation to its chairman or through secretary.

JOHN SEALY,
President Galveston Wharf Co.

INDEX.

A.

	Page.
Absecon Inlet, N. J.....	17
Algoma Harbor, Wis.....	126
Allegheny River, Pa.....	115
Alligator Creek, S. C., improvement of waterway from McClellanville to Charleston.....	45
Alpena Harbor, Mich.....	138
Altamaha River, Ga.....	47
Anacortes Harbor, Wash.....	165
Apalachicola Bay, Harbor, and River, Fla.....	55
Apoon Mouth, Yukon River, Alaska.....	167
Arcadia Harbor, Mich.....	135
Arkansas River, Ark.....	81
Arthur Kill, N. Y. and N. J.....	10
Ashland, Harbor, Wis.....	124
Ashtabula Harbor, Ohio.....	141

B.

Bachelors Slough, Wash.....	164
Baltimore, Md.:	
Engineering district.....	25
Improvement of harbor and channels.....	25, 26, 27
Beaufort Harbor and River, N. C.:	
Improvement of harbor.....	41
Improvement of waterway to Core Sound.....	42
Beaufort Inlet, N. C.:	
Improvement.....	42
Improvement of waterway to Norfolk, Va.....	34
Bellingham Bay and Harbor, Wash.....	167
Big Sandy River, W. Va. and Ky.....	75, 118
Big Sunflower River, Miss.....	83
Biloxi Harbor, Miss.....	58, 62
Blackfish Bayou, Ark.....	172
Black River, Ark. and Mo.....	171
Black River, La.....	71, 75
Black River, Mich.....	139
Black Rock Harbor and Channel, N. Y.:	
Improvement.....	142, 146
Improvement of Lake Erie entrance.....	143
Black Warrior River, Ala.....	89
Blackwater River, Fla.....	55
Boston Harbor, Mass.....	3
Brunswick Harbor, Ga.....	48
Buffalo, N. Y.:	
Engineering district.....	142
Examination and surveys.....	143
Improvement of Black Rock Channel and Tonawanda Harbor.....	142
Improvement of harbor.....	53, 146

C.

Calcasieu Pass and River, La.....	68
California Débris Commission.....	170
Caloosahatchee River, Fla.....	50
Calumet Harbor and River, Ill. and Ind.....	129

	Page.
Cape Fear River, N. C.:	
Improvement above Wilmington (locks and dams).....	43
Improvement at and below Wilmington.....	42
Cape Vincent Harbor, N. Y.....	150
Car shortage.....	102
Cascades Canal, Columbia River, Oreg.....	162
Champlain Lake, N. Y. and Vt.:	
Narrows.....	9
Port Henry Harbor, N. Y.....	9
Charleston, S. C.....	29
Engineering district.....	43
Improvement of harbor.....	46
Improvement of waterway to McClellanville.....	46
Charlevoix Harbor, Mich.....	136
Charlotte Harbor, N. Y.....	146
Chattanooga, Tenn., engineering district.....	103
Cheboygan Harbor, Mich.....	139
Chesapeake Bay, Md. and Va.:	
Thimble Shoal.....	33
Waterway to Beaufort Inlet.....	34
Waterway to Delaware River.....	22
Waterway to sounds of North Carolina (to Pamlico Sound).....	34
York Spit, removal of shoals opposite.....	26
Chicago Harbor and River, Ill.....	129
Chicago, Ill.:	
Drainage canal.....	131
Engineering district.....	129
Chickasaw River, Miss.....	58
Clatskanie River, Oreg.....	163
Cleveland, Ohio:	
Engineering district.....	140
Improvement of harbor.....	140, 141
Clinch River, Tenn.....	105
Clinton River, Mich.....	139
Commercial statistics.....	36, 45, 47, 85
Coal mining operations.....	102
Coenties Reef, New York Harbor, N. Y., removal.....	5
Cold Spring Inlet, N. J.....	20
Coldwater River, Miss.....	82
Colorado River, Ariz.....	152
Columbia River, Oreg. and Wash.....	162, 163, 164, 167
Conneaut Harbor, Ohio.....	141
Connecticut River, Mass. and Conn.....	4
Contentnea Creek, N. C.....	41
Contingencies of rivers and harbors, estimate of appropriation.....	171
Coos Bay, Harbor, and River, Oreg.....	161, 163
Coquille River, Oreg.....	161, 162
Cowlitz River, Wash.....	164
Crescent City Harbor, Cal.....	160
Cumberland River, Ky. and Tenn.....	100
Current River, Ark. and Mo.....	172
Curtis Bay, Baltimore, Md.....	25
Guyahoga River, Cleveland, Ohio.....	146
Cypress Bayou, Tex. and La.....	71

D.

Dallas, Tex., engineering district.....	70
Dalles-Celilo Canal, Oreg. and Wash.....	162
Delaware Bay and River, Pa., N. J., and Del.:	
Improvement of river at Trenton.....	12
Improvement of river, Philadelphia to the sea.....	13
Waterway to Chesapeake Bay.....	32
Des Plaines River, Ill.....	130
Detroit, Mich., engineering district.....	136

Page.

Detroit River, Mich.....	136, 138, 173
Dismal Swamp Canal, Va. and N. C.....	34
Dredges.....	46
Dredging costs.....	13
Drift, removal from New York Harbor.....	4
Dry Straits, Alaska.....	168
Duluth, Minn.:	
Engineering district.....	124
Improvement of Duluth-Superior Harbor.....	124
Dunkirk Harbor, N. Y.....	146, 148

E.

East River, N. Y., improvement, including Coenties Reef.....	4
Erie Harbor, Pa.....	146
Erie Lake:	
Black Rock Harbor, improvement of entrance to.....	142
Channels in waters connecting Great Lakes.....	136, 173
Estimates of appropriations:	
Increases in.....	20, 31, 34, 82, 146, 165, 172
Reductions in.....	56
Examination of rivers and harbors, estimate of appropriation for.....	171

F.

Fairhaven Harbor, Mass.....	4
Fairport Harbor, Ohio.....	141
Feather River, Cal.....	160
Flathead Lake and River, Mont.....	167
Flushing Bay and Creek, N. Y.....	10
Fox River, Wis.....	126
Frankfort Harbor, Mich.....	135
Fuel situation.....	102

G.

Galveston Bay and Harbor, Tex.:	
Improvement of Galveston Channel.....	69
Improvement of harbor entrance.....	69
Galveston Wharf Co., ownership and operation of the.....	174
Gasconade River, Mo.....	100
Grand Calumet River, Ill. and Ind.....	130
Grand Haven Harbor, Mich.....	134
Grand Marais, Mich., harbor of refuge.....	124, 125
Grand Rapids, Mich., engineering district.....	134
Grand River, Mich.....	136
Grays Harbor, Wash.....	166
Grays River, Wash.....	164
Great Lakes.....	136, 173
Great Sodus Bay, N. Y.....	150
Grosse Pointe Channel, Lake St. Clair, Mich.....	137
Grouping system.....	146
Gulfport Harbor, Miss., improvement of channel to Ship Island Harbor.....	58

H.

Harbor Beach, Mich., harbor of refuge.....	139
Hell Gate, East River, N. Y.....	4
Hennepin Canal (Illinois & Mississippi Canal), Ill.....	130, 134
Hillsboro Bay and River, Fla.....	50
Hilo Harbor, Hawaii.....	169
Hiwassee River, Tenn.....	105
Holland Harbor, Mich.....	136
Holmes River, Fla.....	55
Honolulu, Hawaii:	
Engineering district.....	168
Improvement of harbor.....	168

	Page.
Hoquiam River, Wash.....	106
Housatonic River, Conn.....	4
Hudson River, N. Y.....	8
Humboldt Bay and Harbor, Cal.....	159
Huron Harbor, Ohio.....	140
I.	
Illinois & Michigan Canal.....	130
Illinois & Mississippi Canal, Ill.....	130, 134
Illinois River, Ill.....	130
Indiana Harbor, Ind.....	130
J.	
Jacksonville, Fla., engineering district.....	40
Jamaica Bay, N. Y.....	11
K.	
Kahului Harbor, Hawaii.....	169
Kalamazoo River, Mich.....	136
Kansas City, Mo., engineering district.....	92
Kansas River, Kans.....	100
Kenosha Harbor, Wis.....	129
Kentucky River, Ky.....	118
Kettner, Hon. William, resignation from committee.....	90
Kewaunee Harbor, Wis.....	130
Keweenaw Canal, across Keweenaw Point, Mich. (Keweenaw Bay-Lake Superior waterway).....	134
Kinnikinnick River, Wis.....	128
L.	
Lake of the Woods, Minn., improvement of Zippel Bay.....	90
Lake River, Wash.....	164
Lands, acquisition of for river and harbor improvements.....	133
L'Anquille River, Ark.....	177
Leaf River, Miss.....	58
Lewis River, Wash.....	164
Little Rock, Ark., engineering district.....	81
Little Sodus Bay, N. Y.....	150
Livingstone Channel, Detroit River, Mich.....	133, 173
Logs, removal of, proposed legislation.....	59
Lorain Harbor, Ohio.....	141, 142
Los Angeles, Cal.:	
Engineering district.....	150
Improvement of harbor.....	32, 150
Lower Cedar Point, Md., improvement of Potomac River at.....	32
Ludington Harbor, Mich.....	136
McClellanville, S. C., improvement of water to Charleston.....	45
Mackinac Harbor, Mich.....	139
Manistee Harbor and River, Mich.....	134
Manistique Harbor, Mich., improvement.....	125
Manitowoc Harbor, Wis.....	127
Mare Island Strait, Cal.....	158
Marquette Bay and Harbor, Mich.....	125
Mattituck Harbor, N. Y.....	11
Maumee Bay and River, Ohio.....	140
Menominee Harbor and River, Mich. and Wis.....	129
Menomonee River, Wis.....	128
Merrimack River, Mass.....	119
Miami Harbor, Fla.....	49
Michigan City Harbor, Ind.....	130
Michigan, Lake, canal to Sturgeon Bay.....	136
Milwaukee, Wis.:	
Engineering district.....	125
Improvement of inner and outer harbors.....	128

Mississippi River:	Page.
Commercial statistics.....	36, 40, 75
Improvement above Minneapolis—	
Brainerd to Grand Rapids.....	90
Leech and Mississippi Rivers.....	90
Reservoir dams at headwaters.....	87, 90
St. Paul to Minneapolis.....	86
Improvement from Minneapolis to Missouri River.....	84
Improvement from Missouri River to Ohio River.....	83
Improvement of Passes of Mississippi River.....	62
Levees, Head of Passes to Cape Girardeau, Mo.....	96, 98
Towboats, experimental.....	85
Missouri River.....	92
Mobile, Ala., engineering district.....	56
Mobile Bay and Harbor, Ala.....	51-56-58
Mokelumne River, Cal.....	160
Monongahela River, W. Va. and Pa.....	115
Monroe Harbor, Mich.....	139
Monterey Harbor, Cal.....	159
Montgomery, Ala., engineering district.....	55
Morehead City Harbor, N. C., improvement.....	42
Mormon Channel, San Joaquin River, Cal.....	160
Muskegon Harbor and River, Mich.....	136
N.	
Napa River, Cal.....	159, 161
Narrows of Lake Champlain, N. Y. and Vt.....	9
Nashville, Tenn., engineering district.....	100
Nawiliwili Harbor, Hawaii.....	170
Neches River, Tex.....	70
Nehalem Bar and Bay, Oreg.....	162
Neuse River, N. C.....	41
New Bedford Harbor, Mass.....	4
New Haven Harbor, Conn.....	4
New Orleans, La.....	51, 62
Newport News, Va.....	34
Newport, R. I., engineering district.....	4
Newtown Creek, N. Y.....	10
New York Bay and Harbor, N. Y.:	
Channel, Staten Island-Hoffman and Swinburne Islands.....	9, 10
Coenties Reef.....	5
East River, improvement, including Coenties Reef.....	4
Flushing Bay.....	10
Hell Gate, East River.....	4
Hudson River Channel.....	8
Newtown Creek, N. Y.....	10
Staten Island-New Jersey Channels.....	10
Staten Island Sound.....	10
New York engineering districts:	
First.....	4
Second.....	9
Third.....	12
Niagara River, N. Y.:	
Black Rock Channel and Tonawanda Harbor.....	142
Buffalo Harbor.....	53
Improvement.....	146
Surveys, etc.....	143
Nome Harbor, Alaska.....	168
Norfolk Harbor, Va.:	
General improvement, including main channel of Elizabeth River, and portions of Southern, Eastern, and Western Branches.....	33
Improvement of channels to Newport News.....	34
Improvement of Thimble Shoal.....	33
Improvement of waterway to Beaufort Inlet.....	34
Norfolk, Va., engineering district.....	33

O.

	Page
Oak Bay to Port Townsend Bay, Wash., waterway.....	166
Oakland Harbor, Cal.....	157
Occoquan Creek, Va.....	33
Ocmulgee River, Ga.....	47
Oconee River, Ga.....	47
Oconto Harbor, Wis.....	129
Ogdensburg Harbor, N. Y.....	150
Ohio River.....	106
Olcott Harbor, N. Y.....	149
Olympia Harbor, Wash.....	166
Ontonagon Harbor and River, Mich.....	125
Osage River, Mo.....	100
Oswego Harbor, N. Y.....	150
Ouachita River, Ark. and La.....	71, 75

P.

Pamlico River, N. C.....	41
Pascagoula Harbor and River, Miss.:	
Improvement of harbor.....	58, 91
Improvement of river above mouth of Dog River.....	58
Pawcatuck River, R. I. and Conn.....	4
Pawtucket (Seekonk) River, R. I.....	4
Pensacola Bay and Harbor, Fla.....	56
Pentwater Harbor, Mich.....	135
Petaluma Creek, Cal.....	159, 161
Petoskey Harbor, Mich.....	138
Philadelphia, Pa.:	
Engineering district.....	12
Improvement of Delaware River at.....	13
Pittsburgh, Pa.:	
Engineering district.....	115
Improvement of harbor.....	113
Pollock Rip Channel, Mass.....	119
Polson Bay, Flathead Lake, Mont.....	167
Portage Lake, Manistee County, Mich., harbor of refuge, improvement.....	135
Port Clinton Harbor, Ohio.....	141
Port Henry Harbor, N. Y.....	9
Portland Harbor, Me.....	4, 26, 27
Portland, Oreg., engineering districts:	
First.....	161
Second.....	163
Porto Rico:	
Engineering district.....	170
Improvement of San Juan Harbor.....	170
Port Townsend Bay to Oak Bay, Wash., waterway.....	166
Port Washington Harbor, Wis.....	123
Port Wing Harbor, Wis.....	125
Potomac River.....	32, 33
Presque Isle Peninsula, Erie, Pa.....	146
Providence Harbor and River, R. I., improvement of Pawtucket (Seekonk) River.....	4
Puget Sound, Wash.....	165, 166

R.

Racine Harbor, Wis., improvement.....	123
Red River, La., Ark., Tex., and Okla.....	71, 79
Redwood City Harbor, Cal.....	161
Redwood Creek, Cal.....	158
Richmond Harbor, Cal.....	158
Rights of way, acquisition of.....	152
Rogers City Harbor, Mich.....	139
Rouge River, Mich.....	139

S.

Page.

Sabine-Neches Canal.....	70
Sabine River, Tex.....	59-70
Sacramento River, Cal.....	160
Saginaw River, Mich.....	139
St. Clair Flats Canal, Lake, and River, Mich.....	118, 136, 139
St. Francis River, Ark.....	171, 172
St. Helena, Oreg., Columbia River.....	165
St. Johns River, Fla.....	50
St. Joseph Harbor and River, Mich.....	135, 136
St. Louis, Mo., engineering district.....	83
St. Marys River and St. Marys Falls Canal, Mich.....	136
St. Paul, Minn., engineering district.....	86
San Diego Harbor, Cal.....	151
Sandusky Harbor, Ohio.....	140
San Francisco Bay and Harbor, Cal.: Engineering districts—	
First.....	157, 161
Third.....	160
Improvement by removal of rocks.....	158
Improvement of Oakland Harbor.....	157
San Joaquin River, Cal.....	160
San Juan Harbor, P. R.....	170
San Luis Obispo Harbor, Cal.....	152, 157
San Pablo Bay, Cal.: Improvement.....	158
Improvement, including Mare Island Strait.....	158
Sapelo Bar and Harbor, Ga.....	46
Satilla River, Ga.....	46
Saugatuck Harbor, Mich.....	136
Savannah Harbor and River, Ga.....	46
Schuylkill River, Pa.....	16
Seattle, Wash.: Engineering district.....	165
Examinations of east and west waterways in harbor.....	168
Sheboygan Harbor, Wis.....	127
Ship Island Harbor and Pass, Miss., improvement of pass and channel to Gulf- port.....	58
Shrewsbury River, N. J.....	12
Siualaw River, Oreg.....	162, 163
Skagit River, Wash.....	165, 167
Snags, removal of.....	59
Snake River, Idaho, Oreg., and Wash.....	162
Snohomish River, Wash.....	167
South Haven Harbor, Mich.....	134
South Pass, Mississippi River.....	62
Southwest Pass.....	62
Staten Island Sound (Arthur Kill), N. Y. and N. J.....	10
Stockton Channel, San Joaquin River, Cal.....	160
Sturgeon Bay and Lake Michigan Canal, Wis.....	126
Suisun Creek or Channel, Cal.....	159
Superior Bay and Harbor, Wis., improvement of Duluth-Superior Harbor.....	124
Surveys: Of rivers and harbors, estimate of appropriation for.....	171
Resubmission of.....	119
Swinomish Slough, Wash.....	167

T.

Tacoma Harbor, Wash.....	166
Tallahatchie River, Miss.....	82
Tampa Bay and Harbor, Fla.....	51
Tar River, N. C.....	41
Taunton River, Mass.....	119

Tennessee River:	Page.
Above Chattanooga.....	103
Hales Bar Lock and Dam.....	99
Terminal improvements.....	26, 43, 91, 109
Thimble Shoal, Chesapeake Bay, Va.....	33
Tillamook Bay and Bar, Oreg.....	162
Toledo Harbor, Ohio.....	140
Tonawanda Harbor, N. Y.....	143, 146
Transportation lines.....	109
Transportation of coal by rail.....	102
Two Rivers Harbor, Wis.....	127
U.	
Union Lake, Wash.....	166
V.	
Vermilion Harbor, Ohio.....	141
Vicksburg, Miss., engineering district.....	71
Virginia coast waterway.....	21
W.	
Warroad Harbor and River, Minn.....	90
Washington, D. C.:	
Engineering district.....	32
Improvement of Potomac River at.....	33
Washington Lake, Wash.....	166
Water hyacinths, removal of:	
From Alabama, Mississippi, Louisiana, and Texas waters.....	68
From Florida waters.....	52
Water power:	
Black Warrior River, Ala., at Dam 17.....	89
Chicago Drainage Canal.....	131
Mississippi River, dam between Minneapolis and St. Paul, Minn.....	88
St. Marys River, Mich.....	137
Water terminals.....	26, 43, 91, 109
Waterways:	
Beaufort, N. C., to New River, improvement.....	42
Charleston to McClellanville, S. C.....	45
Chesapeake Bay to Delaware River.....	22
Core Sound to Beaufort Harbor, improvement.....	42
Keweenaw Bay to Lake Superior, Mich.....	124
Norfolk, Va., to Beaufort Inlet, N. C.....	34
Puget Sound to Lake Washington.....	165
Virginia coast waterway.....	21
White Lake Harbor, Mich.....	134
White River, Ark.....	172
Wicomico River, Md.....	32
Willamette River, Oreg.....	163, 164
Willapa Harbor and River, Wash.....	106
Wilmington, Del., engineering district.....	17
Wilmington Harbor, Del.....	20
Wilmington, N. C., engineering district.....	41
Winnebago Lake, Wis., improvement of Fox River.....	126
Winyah Bay, S. C.....	43
Y.	
Yamhill River, Oreg.....	164
Yaquina River, Oreg.....	162, 163
Yazoo River, Miss.....	82
Youngs Bay, Oreg.....	165
Yukon River, Alaska.....	167
Z.	
Zippel Bay, Minn.....	90

6

SEWALL SYSTEM OF BANK PROTECTION FOR RIVER CONTROL

HEARINGS

ON THE SUBJECT
OF THE

SEWALL SYSTEM OF BANK PROTECTION FOR RIVER CONTROL

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

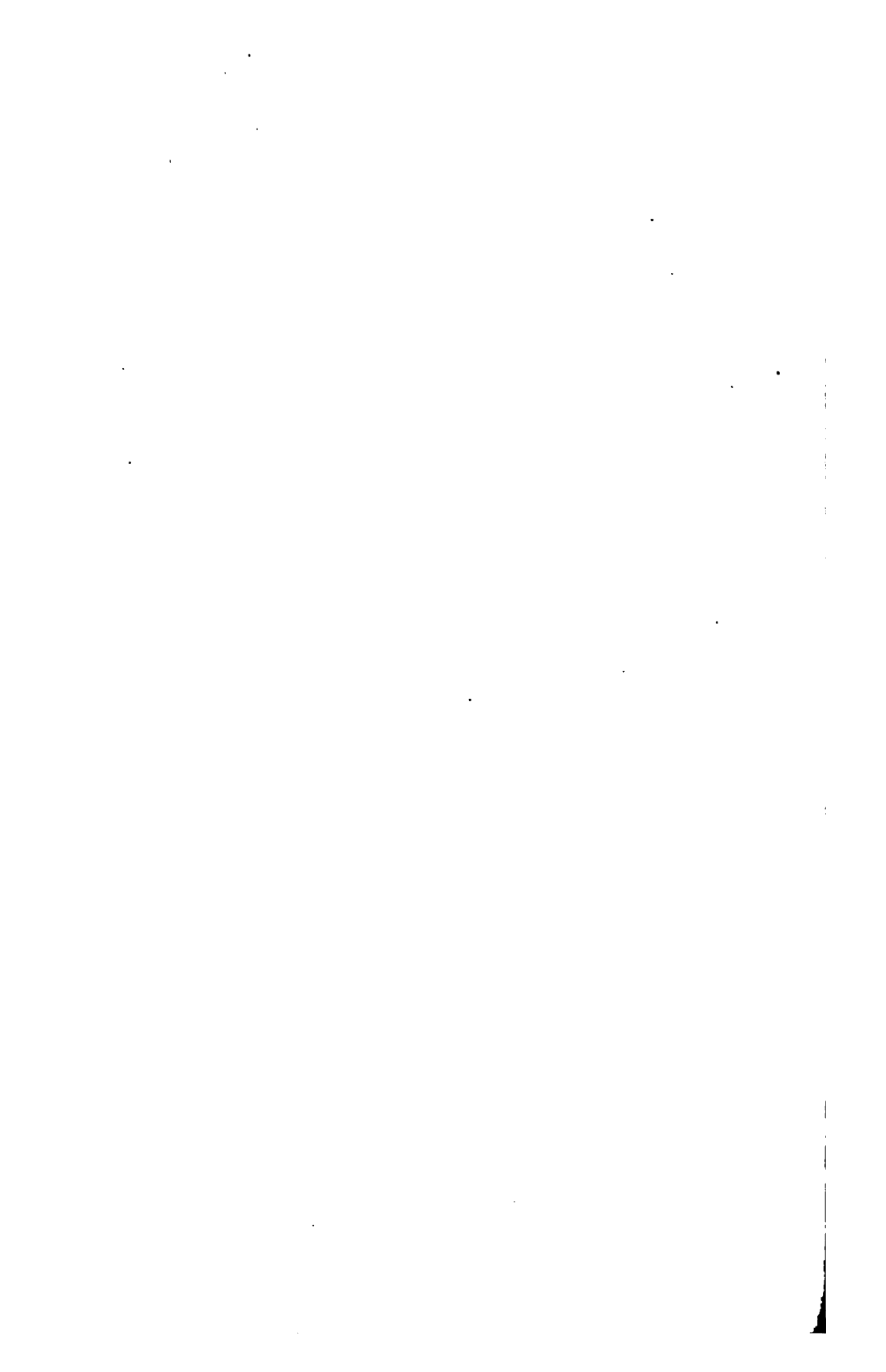
CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
WILLIAM KETTNER, California.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 9, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918



SEWALL SYSTEM OF BANK PROTECTION FOR RIVER CONTROL

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RIVERS AND HARBORS,
Washington, D. C., Wednesday, January 9, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. I failed to state to the committee on yesterday that I had taken the liberty of promising Mr. Dupré and Judge Watkins a hearing of these gentlemen. Mr. Sewall has a method for preventing the caving of the banks of rivers, and desires to present the matter to the committee for its consideration.

Mr. Dupré, will you kindly take charge of the hearing?

Mr. DUPRÉ. I will ask Judge Watkins to present the matter and to present these gentlemen to you.

The CHAIRMAN. Judge, we will be glad to hear from you.

STATEMENT OF HON. JOHN T. WATKINS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA.

Mr. WATKINS. Mr. Chairman and gentlemen of the committee, I will not make any extensive statement. I will simply submit a couple of petitions which I have here, and vouch for the men who have signed them. They are men who are well-known business men of Shreveport, La., and vicinity, appealing to the Government to make a test on Red River of what is known as the Sewall system of bank protection for river control, having for its object the protection of banks of rivers, and also the deepening and regulating of the channels.

Mr. TAYLOR. Of what river?

Mr. WATKINS. Of any river. I will state in this connection that Mr. Sewall has recently been doing some work of this nature in the fourth congressional district of Louisiana, on Red River, which district I represent, and particularly near the city of Shreveport. These two petitions with these signatures which I will file and ask to have made a part of the record are mainly from citizens of Shreveport.

As our time is limited, I will now ask that Mr. Sewall be heard.

STATEMENT OF MR. R. H. F. SEWALL, OF NEW ORLEANS, LA., NOW RESIDING IN SHREVEPORT, LA.

The CHAIRMAN. Give the stenographer your name and state where you reside.

Mr. SEWALL. My name is R. H. F. Sewall, of New Orleans, La., but at present located in Shreveport.

May I suggest the reading of that petition. That will show what is the object and purpose of the petition.

This is a petition dated at Shreveport, La., December, 1917, and reads:

To the Senators and Members of Congress from Louisiana, Washington, D. C.

Sirs: We, the undersigned business men of Shreveport and vicinity earnestly appeal to you for a Government test on Red River of the Sewall system of river control, to demonstrate its value as a means of improving silt-bearing streams for navigation.

This petition [indicating] is from the business men of New Orleans, La., in which they join the Shreveport citizens in their appeal.

I have already done some work in Red River which has stopped the caving along Douglass Island river front. This is just north of Shreveport.

Mr. TAYLOR. You are a civil engineer?

Mr. SEWALL. No, sir; I am only a natural-born American citizen. I was never graduated as an engineer, but my friends call me a natural engineer. This is not the first time I have been before this committee.

I have brought with me petitions of citizens in the neighborhood of New Orleans and Bayou Goula, which have been read to this committee before. This one here [indicating] contains perhaps a thousand names. It is dated at New Orleans, December 23, 1895:

We the undersigned residents, in the vicinity of the Poland Street dyke, and others who have seen it and its beneficial effects can testify that we firmly believe that caving can be stopped in any bend, by the erection of a sufficient number of dikes, as this dike has stopped the caving below Jackson sawmill.

The mayor of the city of New Orleans has signed it, and quite a number of other business men.

Here is another petition, dated January 17, 1896:

To the Senate and House of Representatives of the Fifty-fourth Congress of the United States of America:

We, the undersigned riparian owners, steamboat men, and residents on the banks of the Mississippi River and the city of New Orleans, unhesitatingly say that we believe the channel of the Mississippi River can be so improved by a proper application of the Sewall dikes as to make the banks permanent, thereby improving navigation and saving to the Government vast sums of money annually in levee building, dredging, etc.

Two such dikes have been constructed by private enterprise, one at Bayou Goula, Iberville Parish, La., and one at Poland Street in the city of New Orleans, both of which have given perfect satisfaction, as will be seen by accompanying certificates, but as only one dike in a bend is not sufficient upon which to risk the verdict of such an important attainment, especially when the Government has spent millions of dollars, and is still spending vast sums in attempting to accomplish this all important end, we therefore respectfully urge that the importance of this subject should justify the present Congress to make a special appropriation to give the system (which is cheap and effective) a fair trial this high-water season.

This is signed by John D. Murrell, of the George M. Murrell Plantation & Manufacturing Co., and sugar planters from Bayou Goula and below Baton Rouge, on both sides of the river. And then I have another petition here. It was written in Washington, D. C., and signed by every Member of the House. It was dated March 23, 1914.

HON. JAMES P. CLARK, chairman, and MEMBERS OF COMMITTEE ON COMMERCE,
United States Senate, Washington, D. C.

MR. CHAIRMAN AND MEMBERS: We have been requested by a large number of business men of the city of New Orleans and State of Louisiana, among

them are civil engineers, asking for a Government test of what is known as the Sewall plan of bank protection as a means of river control and flood prevention.

These letters speak very confidently of the plan, and we ask that an allotment be made from the appropriation for the improvement of the Mississippi River for this test somewhere within the State of Louisiana. It is signed, Albert Estopinal, first district; Robert F. Broussard, third district; J. B. Aswell, eighth district; L. R. Morgan, sixth district; L. Lazaro, seventh district; J. T. Watkins, fourth district; H. Garland Dupré, second district; and Walter Elder, fifth district. Every one of them signed it.

Here is another one dated at Reserve, La., November 17, 1913, addressed to Hon. Robert F. Broussard, Albert Estopinal, H. Garland Dupré, John T. Watkins, Walter Elder, Louis L. Morgan, Ladislas Lazaro, and James B. Aswell, members of Congress from Louisiana:

We wish to thank you individually and collectively for the part you took in bringing the Sewall Bros. method of bank protection to the Committee of Rivers and Harbors on the 15th of last August, and trust you will renew your efforts with telling effect when Congress convenes December 3d.

We desire to further express our confidence in the said method, and beg you to use your influence with the proper authorities to have the trial of said method made on our river front where the levee and much valuable property is threatened by the encroachment of the river.

They have put the levee back from two to three hundred feet, or three or four hundred feet, I suppose, since then. This was just above New Orleans, you know.

That was signed by all the sugar planters in that section of the country and when Congress convened again I was up Red River at work and could not attend.

Mr. DUPRÉ. You are consuming your time. Of course, you can use your time as you please, but these things can be filed with the committee and you had better go ahead and state what your plan is.

Mr. SEWALL. I want to state then, that I think it would be better for Mr. J. W. T. Stephens to do that. He is a civil engineer who has been helping me along for the last 10 or 15 years.

The CHAIRMAN. Just as you prefer.

Mr. STEPHENS. You can state what the system is.

Mr. SEWALL. Well, the system consists—can you see this sketch (Exhibit No. 1) over here on this chart? This represents a concave bend in the river, you see, coming down here in this direction, the current impinges against the toe of the bank, washes it away and makes it a caving bend. This sketch is made from a survey after the spur dams were in place. You will note the spur dams are pointing at an angle of about 45 degrees up stream. The current comes down here [indicating] and washes away this bank [indicating]. We put a spur dam here which caught the current and formed an eddy which extended some distance above to this point here, and forced the stream away from the bank [indicating]. This dam is 125 feet long. It crossed the deepest part of the river which was, at the low stage of the river, about 12 feet. We crossed clear across. This old bank on the opposite side of the river was perhaps a quarter of a mile away and the eddy extended up stream to this high point above.

Mr. DUPRÉ. On what stream was that?

Mr. SEWALL. On Red River just above Shreveport.

Mr. DUPRÉ. And how long ago was that?

Mr. SEWALL. This spur was built in the fall of 1915 and the system completed in the summer of 1916. The two upper ones were built before the high water came, and these others were built after high water came [indicating]. Before these were built, the banks would cave during high water, but after this spur dam was built, it caused an eddy away up stream and had the effect of pushing the current out, and caused a sand bar to form which extended down from this point above. And here is the river now [indicating]. It caused, perhaps, upwards of 100 to 150 acres of sandbar to form away from this point, away over here, washing away a tremendous amount of sand from the bar on the other side, and this spur dam No. 2 [indicating] caught the full force of the current and protected the bank above from further caving. Soon after the flood subsided [indicating] these other spur dams were built and the bank has not caved at all since, but to the contrary; the sand bar now is built up pretty nearly to the top of these spur dams, and the swift water path is now outside of the end of all the spur dams as far away as it was originally from the bank; whereas before the spur dams were built the deep and swift water path was not further than 45 or 50 feet away from the high bank.

The old Bossier Point, shown here on map No. 3 (U. S.) is about where the river was at this point when I commenced building the spur dams. And around in here [indicating], after spur No. 1 and No. 2 were built, the river shifted over from this bar here and washed away the bar on the Bossier side as indicated by colored crayon on map No. 3 (U. S.). And the river is still here, passing serenely on in front of the spur dams without affecting the bank in any way. And right at this point over here [indicating], I was over there one day, week before last—you can stand on the top of the bank and spit out in the water below at this low water stage. The same condition prevailed along Douglas Island before the spurs were built, but, now conditions are changed, you cannot spit into the water, the sand bar formation between the spurs forming a brace for the bank extends already nearly to the outer ends of the spurs. In some places you cannot throw a stick from the bank into the water, which is evidence that the bank is going out, and can not cave.

Of course, if you had time to send a committee there to see this work they would be convinced beyond peradventure that the system is infallible if properly executed.

I will now turn the matter over to Mr. Stephens who is better able to talk in public than I am.

Mr. DUPRÉ. I would like to ask you, Mr. Sewall, a few questions: When did you make your first experiment with your system? Approximately in the nineties, in the Mississippi River, wasn't it?

Mr. SEWALL. 1892 or 1893, wasn't it? I can show you a map—

Mr. DUPRÉ. If you can say in the nineties, that will be sufficient.

Mr. SEWALL (exhibiting map No. 4). 1894; October, 1894, the day after this spur dam was built, Capt. John Millis made a survey of the river there, and this was the spur dam built to show Gen. C. B. Comstock that we could drive in deep water and accomplish what he claimed to be a mechanical impossibility.

Mr. DUPRÉ. That was in the Mississippi River, right in the Bayou Goula neighborhood?

Mr. SEWALL. Right at Bayou Goula.

Mr. DUPRÉ. When did you make your next experiment? Or commence work around Poland Street?

Mr. SEWALL. The Poland Street dike was built first; it was built February, 1894, to prevent the Orleans Levee Board from building a levee behind the Jackson sawmill. The Levee Board had staked out a new levee behind the mill when Lambou and Noel employed me to build the dike which effectually stopped the caving, saved the old levee and mill, also much other valuable property. The new levee was never built. See letters Exhibit No. 5 and especially letters No. 4 and No. 5 of said exhibit.

Mr. DUPRÉ. That was the extent of your work on the Mississippi River?

Mr. SEWALL. That was the extent of the work on the Mississippi River.

Mr. DUPRÉ. How long have you been operating on the Red River?

Mr. SEWALL. I began work during the fall of 1915.

Mr. DUPRÉ. And where have those operations been?

Mr. SEWALL. On Red River, just above Shreveport, at what is known as Douglass Island Bend.

Mr. DUPRÉ. Under what circumstances did you do this work? By contract with whom?

Mr. SEWALL. I did it under contract with the city of Shreveport, the police jury of the parish of Caddo, and the Caddo Levee Board.

Mr. DUPRÉ. Is that work still under way?

Mr. SEWALL. That work is still standing there. Not under way; it is completed.

Mr. DUPRÉ. Is your system patented?

Mr. SEWALL. The system is now patented; that is, I got a patent out when I did that work, because it was something new. But so far as the patent is concerned, Mr. Dupré, it is free to the Government, whenever the Government wants to use it. I am not in this thing for money only. I got the patent out because I did not want contractors there and everywhere else to rob me, but with my country it is different. I have devoted a great part of my life and have spent about \$35,000 since the year 1884 on this proposition (not of my own money), and to-day I am a poor man because I staked my life in vindicating my efforts, and I am now living for the purpose of proving that my system is correct. And when that time comes, I am willing to say "good-by."

Mr. WATKINS. I suggest that Mr. Stephens be heard now. Mr. Sewall says Mr. Stephens can more accurately explain the system, as he is not accustomed to speaking in public.

Mr. SEWALL. I am not; I admit that. There is so much at stake, that is, for the Government, not for me—I am getting old, 72 years the 6th of this month, and I am not going to live much longer at best, but this is a great problem. I know you will never build another levee on the lower Mississippi River after this system is once given a fair trial on Red River, which is an ideal river for the test, as caving there has destroyed the channel so that navigation is impossible. Earth enough fell in the river along Douglass Island front during the spring of 1916 to fill the entire bed above the V. S. and P. bridge for more than a thousand feet. The current is filling

the old channel and making a new one all the time. When this Red River test has been made the system will be adopted on the Mississippi and the building of new levees will cease.

At present during low stages of the river a gasoline launch drawing 18 inches of water can not go from Lenzburg to Shreveport, while along the concave bends there is an average depth of from 7 to 14 feet of water according to the width of the low-water channel. Flowing water is nature's dredge and if controlled by fixing the banks of silt bearing streams will scour out a permanent and well defined channel equal in depth and width to the volume of flow.

**STATEMENT OF MR. J. W. T. STEPHENS, CIVIL ENGINEER FROM
NEW ORLEANS, LA.**

Mr. DUPRÉ. You had better state what has been your experience in engineering, and whether you were graduated from a school, or what has been your education along this line.

Mr. STEPHENS. I was trained as a civil engineer in England. Our training is different there from what it is in this country. In other words, when we finish our college education we have to spend five years apprenticeship with an engineer in practice. We have to be trained in all the details of construction work and go through brick masonry and all the other things.

In this country, I was engaged in New York on bridge construction over the Harlem River for about three years. I then came down to New Orleans and constructed some large sewers, which was the first business I had in New Orleans. Since that time I have been to various places in Central America and other parts of this country. I am now in New Orleans, where for five years I was an assistant with the drainage, sewage and water board, and then went into practice for myself, but have several other connections with the city.

With regard to my experience as a contracting engineer, I was with John Aird & Sons, and Pearson & Sons, of London, on some of the largest work in England. I was engaged as a contracting engineer on the first tunnel from New York to Jersey.

My experience has been so varied that it would take a long time for me to explain it. But I have had 45 years of it, so I know what I am talking about.

With regard to this system, and the reason I took an interest in it, Mr. Sewall happened to be one of my subcontractors on work at New Orleans, and knowing that a similar construction existed on the River Thames in England, though not of interlocking sheeting, it struck me that by proper development this system can not fail. Therefore I interested myself in trying to introduce it.

The CHAIRMAN. Let me suggest that you make your statement first, without reference to a map, and then refer to the map afterwards.

Mr. STEPHENS. The Sewall system or method of bank protection, and river control, is simplicity itself. The erosive effect of the current is eliminated by the erection of a number of spur dams or baffle walls constructed of dovetailed or interlocking sheet piling, of lumber, steel, or reinforced concrete, and of necessary sizes and lengths:

the said sizes and lengths being determined by the depth of water and kind of material forming the bank and bottom of the channel, the penetration being determined by these factors. The application of the system varies according to the curvature of the river, but generally should be driven from the bank outwardly and in a direction pointing to an angle of 45° or less upstream.

The bank or shore end should be driven so that the top of the sheeting will close into the face of the bank, all as shown on blue-print diagram No. 2, while the following members should be driven out level for a determined distance therefrom and then commence to step down until perhaps finishing at the bottom of the channel or as may be found expedient to attain satisfactory and safe penetration.

The distance apart at which these baffles should be placed must be determined by the curvature of the river. The result of a complete installation will be the effectual diversion of the undermining currents by the wedging of water against the bank above the structure, and consequently this water will form a cushion against the bank, effectually protecting it while the flowing stream will figuratively roll by.

A further effect of these structures is that there is a slow and continual upward movement of the confined waters along the bank, which will cause a precipitation of the sediment carried by the water, along the toe of the bank, gradually resulting in building up the slope of the depleted bank.

This system is, in my opinion, the most scientific and certain of any ever tried. The comparative cost as against any matressing is more than 75 per cent less. The stability can not be compared.

The system will establish a constant channel in any river where shifting banks, sand, and mud bars are formed by judicious emplacement on both sides which will concentrate the natural or normal flow and consequently deepen the channel.

Connecting it with Red River it is necessary for me to explain the formation of Red River banks, by this blue print (Exhibit No. 1). At low water there is something like 25 or 30 feet of a bluff. When the freshets come, as they have come frequently in the last three or four years, they eat away a great deal of territory and valuable land. And I want to call your attention to the fact that between April and December, in one year, 1915, there were 700 feet washed away of one man's property as shown here [indicating] where this work was executed. And after this dam was driven [indicating] only about 150 feet went after he had placed those wooden spur dams or what I term baffle walls. I used the term "baffle" for the reason that it baffles the river current, or the river, and throws it away from the bank, which has been proven by this work. The caving stopped.

Although the work was executed under very strenuous circumstances for obtaining funds for plant, etc., it has succeeded.

We have also put in five dams, 30 miles below, at Lenzburg, for the I. R. & N. Railroad.

I am not here to beg for money: I simply want to explain for Mr. Sewall what the system is.

MR. WATKINS. That is what we want to hear—what are the distinguishing features of the Sewall system?

Mr. STEPHENS. The distinguishing features of the Sewall system are that if we start from the river bank to drive spur dams at right angles, we are wrong. We point upstream and step down from low-water mark until we strike the bottom, penetrating this portion of the bed, which prevents the possibility of the dam being washed out, and this forms a pocket of water up above, which the natural current can not pass through, and must pass by, and forming a cushion, and in that way forming an eddy and depositing the mud carried in the water, and by this precipitation, it gradually fills up this pocket until it is up with the level of the top of our spur dam. In pointing them upstream, we equalize the pressure of the water on both sides, and that takes great strain off of it.

That is really all there is to explain.

Mr. WATKINS. Does this revetment or bank protection point upstream or downstream?

Mr. STEPHENS. Upstream only. If you pointed it downstream it would wash out.

I made a diagram blue print (Exhibit No. 2) showing one spur dam B. There is the bank A [indicating]. This represents a line of a bluff bank, and B is a spur dam pointing at an angle of 45 degrees upstream. As the current comes down, it retards the water and, as it can not get through this corner, it forms a cushion and the current passes by.

Here is a cross section, looking upstream. At A is a bluff formed by the caving of bank. B is a baffle wall showing the filling process which goes on until it refills an equal area to that which the wall has taken from the area of water and an equal scour takes place beyond the toe of wall at C.

Mr. WATKINS. How far do these dikes project into the river?

Mr. STEPHENS. That is variable. They are probably 150 to 200 feet, and one is 75 feet.

Mr. WATKINS. How far apart are they, approximately?

Mr. STEPHENS. From 200 to 300 feet. You might have to put them closer in case you find you have a bad bank where there is considerable seepage through the sand structure with a heavy upper earth covering, as is the case sometimes with the Red River. And wherever they have a considerable bed of sand through which the ground water seeps they have to construct the wall further into the bank to cut off said seepage.

Mr. SEWALL. I will say I agreed to build seven dams near Shreveport to stop the caving, but found it necessary to build eight; and I built eight. Spur dam No. 3, however, was very poorly constructed, built the best we could with the plant we had. I could not build it up from the water to the vertical bank because of the slope which forms when the river begins to fall, so I filled that out with handwork. And all for the same reason were completed with handwork, because the pile driver would not permit us to go up close enough to the bluff bank, as Mr. Stephens has explained. After the water had risen, perhaps 15 or 20 feet above the top, it fell very swiftly—it fell as fast or faster than it rose, the earth was thoroughly saturated with seepage water and seepage flow from the land into the river through this soft alluvial deposit where the handwork was penetrated and washed away, which permitted the water at the very low

stage to run around the land end of the dike and washed away from the bank as much as 30, 40, or 50 feet. And that is what a few point at to-day to brand it as a failure; but it proves more than anything else does—the correctness of the principle involved. In other words, the Board of State Engineers of the State of Louisiana has not yet pronounced the work a success, due to the fact that one of these spur dams has partly gone away. But it has had good effect and the other spurs are there yet and doing their work, so the pocket will be filled up which was caused by the flow around the inner end as soon as we have another high water, because the spur dams above are standing and the spur dams below are standing and consequently the space between No. 2 and No. 4, including the pocket, can not fail to fill up. I have always claimed the danger to these spur dams is not during high water, but it is during low water. The danger in all work of this kind is during low water.

It is found that the work done by the Caddo Levee Board is only impaired during low water, permitting the next rise to wash it away. The work which the levee board has done on Red River, wherever it has proven a failure, slid out during low water. It stands during the high water, but when the water falls, the seepage flow from the land causes the mats and rock to slip and gives the water a chance to get behind it. When we get properly organized to do this work, four or five pile drivers can be worked in one bend and the channel corrected in a few days. The Mississippi River Commission once had 40 drivers at work at Plumb Point on the Mississippi River, with disastrous results.

Mr. STEPHENS. I simply want to explain to these gentlemen the difference between an ordinary pile driver and the one Mr. Sewall refers to. We all know the hammer used in driving piles is controlled by what is called the leads. With his invention we have three, two telescopic leads, so that if we want to put one lead down to bottom of the river so as to center the pile and hold it in position, we can do so. Therefore we can drive any depth below water just as well as you can above the water with a floating machine with the leads above the water. We can put in a pile below the water and then go out and put in another pile.

Mr. SEWALL. I want to say this about the amount of labor and thought I have put on this thing. I have got a patent here that appears to be as complicated as an automobile. I have devoted more time and attention to the working out of the details than any automobile manufacturer has in working out his details. The serial number of my patent is —: this patent has not been issued yet, but just allowed. It is not necessary to describe the details of my driver here. However, it might be well to make a rough comparison between the plant required to stop caving under my plan and that required to do the work only under the plans of the Mississippi River Commission.

First, to begin with, under my plan, I should require one pair of small barges about 28 feet long and 14 feet wide, coupled together and spaced 4 feet apart. This outfit is supplied with an engine and boiler, steam hammer, steam pump, tools, ropes, etc., all of which can be put in place for about \$10,000. With this rig and a crew of perhaps not more than twenty good men a spur should be built every

week. Seven such drivers would perhaps complete an entire bend every week.

Secnd, I can not form an idea as to the probable cost of successfully doing bank protection work under the Mississippi River Commission's plan, which plan was copied by the board of State engineers for protecting caving banks on Red River. In the first place, when the stage of the river is favorable for the work it would be impossible to get their plant in the river. Not for \$100 per lineal foot would I agree to stop caving under their plan on Red River. See Exhibit No. —, proposals for bank protection work. But under my plan I can guarantee to stop caving as an architect guarantees the stability of his buildings if constructed according to his plans. In other words, I would be willing to take a contract under a "No cure, no pay" plan, if I were financially strong enough.

Under their plan they require a fleet of towboats and tugs to handle their mattresses and an army of men.

As stated the specifications are too long to read, which is necessary in a machine of this kind. It will put piles down below the surface of the water 30, 40, or 50 feet deep, just like a pin machine will stick pins in paper. This shows the side elevation of it, and here is the front elevation [indicating]. That pile driver had 30 foot wooden leads and the outside supplemental or telescopic leads are 75 feet long, and the inner pair 35.

This shows a set of stringers on the bottom of the river, just like it is at the water level. No matter if the water rises 10 feet in a night, we could just let the leads rest right on the bottom, locked into the work the way you see it there.

The CHAIRMAN. We could not put those drawings in the record.

Mr. SEWALL. Certainly not. I am just explaining this so as to satisfy you gentlemen that I am not claiming to be able to do an impossibility. It is impossible for any ordinary driver to put piling down the way I propose to do it, as was stated by Gen. C. B. Comstock, then the first president of the Mississippi River Commission, when I appealed to him for the job.

Mr. DUPRÉ. Conceding the success and feasibility of your system in Red River, do you think it possible to apply the same construction in a stream like the Mississippi?

Mr. SEWALL. I think it will be a little more expensive, but easier. I think Red River is more difficult to control than the Mississippi River. And I have found out that there is water enough in Red River to navigate it any time of the year. For instance, right there at Douglass Island, the river is probably 250 feet wide at the low stage of the river and 10 to 12 feet deep.

Mr. DUPRÉ. What happened to the dikes you constructed at Bayou Goula and Poland Street.

Mr. SEWALL. The inner portion of the Poland Street dike stood there until Mr. A. C. Bell, city engineer, cut it down.

Mr. DUPRÉ. How long did it stand there?

Mr. SEWALL. The portion below the surface of the slope of the river is there now, and will be for all time.

Mr. DUPRÉ. How long was it since Mr. Bell cut it down?

Mr. SEWALL. I don't know. I believe they wanted to extend a wharf down that way, and this dike was in the way. I have never been there since.

Mr. DUPRÉ. It was not washed out?

Mr. SEWALL. Oh, no, sir; a portion of the outer end failed, due to the fact that it was left standing above the water.

Mr. DUPRÉ. What happened to the Bayou Goula dike?

Mr. SEWALL. The Bayou Goula dike, like the Poland Street dike, was left up above the water and stood 22 feet above low-water stage, and it was standing in water 92 feet deep, making 114 feet exposure. It was not driven down the way we propose to do it now, and the way we did do in a measure at Douglass Island in Red River. This dike was not expected to stand alone. It was only intended to show Gen. Comstock that we could drive in deep water, thinking that he would recommend or give the system a thorough Government test. Spliced piling were used, some of them 135 feet long. See Exhibit 5, sketch made by U. S. Engineer from actual survey; note cross section of the river below with the dike shown to the left. After the dike failed, houses, stoves, etc., were torn down and new levees built at a great loss and inconvenience to owners.

Mr. DUPRÉ. Do those things prove dangerous to navigation?

Mr. SEWALL. No, sir. They can be made to conform to the natural slope of the bank, so as to only maintain it, or they can be pushed out as far from the bank as may be required to narrow the channel and wash away the long flat slope of the sand bar on the opposite side of the river. In this way the curvature of the concave bends would be less, the channel narrowed and naturally deepened.

Mr. WATKINS. What is the effect on navigation; is it injurious or beneficial?

Mr. SEWALL. It would certainly improve navigation; in fact, Red River could be made navigable by its application.

Mr. WATKINS. In what way?

Mr. SEWALL. From the fact that it would give you at all stages of the river a channel as deep and as wide as the flow of water would require. We could not guarantee to give you water in Red River all the time, but we could give you a channel with level bottom, fixed and well defined banks as deep and as wide as nature requires for the flow.

Mr. WATKINS. How expensive is it?

Mr. SEWALL. I think, sir, that Red River could be treated from Shreveport down to its mouth for about \$4 per lineal foot, and perhaps less; because when you stop caving in one bend it will reduce the caving in the next bend below, the angle of deflection is decreased so as to reduce the impact of the current against the bank in the bend below on the other side of the river. In other words, it will strike the bank in the next caving bend further down the river than it originally did. It is just like playing billiards; if you shoot across yonder you are going to come back here [indicating]. If you shoot over yonder then you are going to come back further down; flowing water has the same effect. And when I was building the spur dam on Douglass Island some of the officers of the B. S. & P. R. R. came over to look at the work, their object being to protect the Bossier end of their bridge. Knowing the gentlemen and their mission, I walked to where they were and told them that the work that I was doing would stop the caving at the Bossier end of their bridge. They expressed no opinion. Railroad officials are very cau-

tious. I noticed, however, that the work was done, and the caving stopped as I predicted. The channel has moved back to a safe distance from the bank to about where I said it would.

Mr. DUPRÉ. I think you have pretty well stated what your plan is. Your time has about expired, and possibly some member of the committee may desire to ask you a few questions.

Mr. TAYLOR. Could this proposed work be done without your assistance or without the use of your patented machine?

Mr. SEWALL. I do not think, sir, that any one could properly drive the piling without the use of my driver, but anybody can use this machine. You won't have to have even a pile-driver foreman. You can take any man with the ability to handle a crew and use this rig—just like I could operate an automobile, but could not build one.

Mr. DUPRÉ. I would like to file a petition forwarded to me by some people in New Orleans, including the names of many prominent engineers, contractors, and reputable citizens, indorsing this plan.

(The petition referred to was filed with the committee.)

Mr. OSBORNE. I would like to ask Mr. Sewall one question. It looks to me to be a very simple plan, depending somewhat for its success upon the local conditions—the swiftness of the stream, the condition of the bank, and all that.

Mr. SEWALL. Yes, sir.

Mr. OSBORNE. There is one question I would like to ask: Where the current comes down the river and catches the point of the wing dam, and turns in, has your experience ever been that it cuts the levee on the inside?

Mr. SEWALL. I think this little sketch will answer that question. There is the high bank and there is the way they point up stream. And if necessary to drive further into the bank, we can extend it further in. You see, this spur dam goes down until it gets to the bottom of the river at the outer end. The deep channel is there.

Mr. OSBORNE. And you prevent the land from caving?

Mr. SEWALL. Yes, sir. And while I can I wish to explain further than Mr. Stephens did, the difference between the Sewall system and that used by the Mississippi River Commission and the Board of State Engineers.

(See Exhibit No. 6 for Mississippi Commission's plan.)

First. They widen the river 40 or 50 feet at the surface, thus inviting the swift water path near the caving bank in the concave bend which causes more caving in the next bend below on the opposite side of the river.

Second. While widening the river to prevent it from caving, they place all of the material in the river, which together with the rock and mattress tend to shoal the channel and elevate flood levels.

Third. They plaster the slope with concrete, reinforced with wire mesh, which presents a smooth surface increasing the flow nearer to the concave bend, which in turn increases caving on the opposite side of the river in the first bend below.

Fourth. This work must be done only at low water stage of the river and when in deep water is very uncertain as to its placement and results. Its cost is perhaps four or five times greater than the Sewall system.

The Sewall plan is:

First. The channel is narrowed and the swift-water path pushed away from the concave side of the river, which reduces caving in the first bend below on the opposite side of the river while effectually protecting the immediate bank.

Second. By the application of the Sewall plan silt traps are formed along the concave bends which catch the silt from the flowing water and build up the banks, thus deepening the channel and lowering flood levels.

Third. By the Sewall plan the current is baffled near the caving bank and made to fill the traps with silt while pushing the swift-water path away and further reducing caving in the first bend below on the opposite side of the river.

Fourth. It is possible to do some work at any stage when the water is within the banks of the river, the nature and execution of which is positive, while the cost is perhaps five or six times less than the plan used by the Mississippi River Commission.

A Government test is necessary to prove these assertions.

Mr. STEPHENS. We want to thank the committee for having extended to us this opportunity to be heard.

(The committee thereupon proceeded to hearing upon the estimates.)

RELATION OF UNITED STATES SHIPPING BOARD TO
IMPROVEMENTS FOR RIVERS AND HARBORS

HEARINGS

ON THE SUBJECT
OF THE

RELATION OF THE UNITED STATES SHIPPING BOARD TO
IMPROVEMENTS FOR RIVERS AND HARBORS

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
HOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

FEBRUARY 6, 1918.



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

RELATION OF UNITED STATES SHIPPING BOARD TO IMPROVEMENTS FOR RIVERS AND HARBORS.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Wednesday, February 6, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order. Gentlemen, this meeting was called particularly to hear representatives from the Shipping Board in response to an invitation from the committee. We have with us Capt. Bakenhus, civil engineer, United States Navy, connected with the Shipping Board, and also Mr. Jones. I have been talking with these gentlemen regarding the purpose of this hearing and, perhaps, it might be well to make just a brief statement.

This committee considers appropriations for the maintenance of completed projects and also for the further improvement of projects which have been heretofore adopted but not completed, and appropriations for the maintenance and further improvement of projects are based upon estimates and recommendations made by the War Department, through the Chief of Engineers. Those estimates are predicated upon the amount which can be profitably and wisely expended during the ensuing fiscal year.

Of course, the members of the committee understand that we, like any other appropriating committee of Congress, consider, in making appropriations and providing for original propositions, the estimates of the administrative officers of the department having charge of the activity of the Government of which the committee has jurisdiction. In considering some of these appropriations for the further improvement of uncompleted projects, complaint has been made by members and by citizens from the localities that the amounts recommended by the War Department were not sufficient because of the commercial interests of the port, and also because the demands of the Shipping Board in its activities required that the work be expedited. We have said, at least the chairman has taken the liberty of saying, that if it can be shown that a larger appropriation for the expedition of the improvement is necessary as a war exigency the committee would be very glad to consider increased appropriations, with the further suggestion that in addition to submitting a recommendation to the committee they submit a recommendation to the War Department, say, from the Shipping Board or the other governmental activity which recommends the expedition of the work. Then in the consideration of new projects, while the committee has not reached any final decision as to whether it will take up new projects,

the chairman of the committee has said, presumably expressing the attitude of the committee, that if it could be shown as to any one of these new projects that it was intimately associated with the prosecution of the war the committee would be glad to consider its inclusion in the bill.

Where a suggestion has been made that the adoption of a new project is necessary to further the activities of the Shipping Board in the building of its commercial fleet for the use of the Nation, a recommendation from the Shipping Board or a request to this committee and also to the War Department would certainly be influential in inducing the committee to adopt a new project, because it would then be shown to be intimately associated with the prosecution of the war. So these gentlemen are here at the instance of Mr. Hurley, I assume, the chairman of the Shipping Board. Some of the Members expressed a desire for the presence also of Mr. Hurley and of Mr. Franklin; but in response to a telephone message Mr. Hurley states that Mr. Franklin has an imperative engagement this morning which he could not possibly leave and which would prevent his coming. No reason was assigned why Mr. Hurley himself did not come, but doubtless there was a good reason. So the committee will now be glad to hear from Capt. Bakenhus.

STATEMENT OF CAPT. R. E. BAKENHUS, CIVIL ENGINEER, UNITED STATES NAVY, ACCOMPANIED BY MR. J. WARREN JONES.

Mr. GRAY. May I inquire whether the captain is to speak generally or with reference to any particular project?

The CHAIRMAN. Both.

Mr. GRAY. Is he to speak with reference to a project that has already been adopted and also new projects that we propose to adopt? You remember, the Mobile project, with which I am intimately connected, is an adopted project.

The CHAIRMAN. Yes.

Mr. GRAY. So that your reference to new projects has nothing to do with it?

The CHAIRMAN. Nothing at all.

Mr. DEMPSEY. Have you abandoned the idea of having Mr. Franklin and Mr. Hurley here?

The CHAIRMAN. That is for the committee to decide after we hear from these gentlemen.

Mr. DEMPSEY. I thought that might influence the scope of the examination now.

The CHAIRMAN. I can not say as to their attendance. I wrote a letter, which some of the members of the committee have seen.

Mr. FREAR. One further question. Facts have been presented to us by the War Department as to balances on hand and what will be needed for carrying on these improvements. Now, are those matters to be discussed at this time or are we simply to have the opinion of the Shipping Board, represented by those who are here, as to what they think is needed, or are we to get further advice from the War Department in the matter? I notice the engineer is not present this morning.

The CHAIRMAN. Of course, these gentlemen are not connected with the War Department or the office of the Chief of Engineers of the

War Department, and they have no knowledge of the basis upon which the engineers made recommendations for appropriations other than the official reports. As I understand—and as I tried to state—these gentlemen are here to inform the committee as to whether the needs of the Shipping Board require enlarged appropriations and the expedition of the improvement of any project or the adoption of any new project.

Mr. FREAR. I was under the impression that the engineer force knew what equipment they had and what their ability was to push the work, and I was just wondering—

The CHAIRMAN (interposing). That is another phase of the matter and we will not go into it now.

Mr. FREAR. Will the Shipping Board make recommendations to the War Department or is the committee expected to act on these matters upon its own judgment?

The CHAIRMAN. There is no reason why the committee should not hear these gentlemen now and then, quite naturally, before the committee acts it would want to hear further from the War Department.

Now, Capt. Bakenhus, shall we direct your attention to certain river and harbor improvements, as to which representations have been made to the committee that the needs of the Shipping Board require that the improvements be completed at an early date or that certain projects be adopted, or do you desire to make some general statements?

Capt. BAKENHUS. I prefer to make a general statement first, so that the committee may understand the policy that the Shipping Board is following: I would like to preface what I have to say by stating that I am connected with the Emergency Fleet Corporation, which is particularly concerned with the building of ships and I have not been connected with the Shipping Board directly, except through the Emergency Fleet Corporation.

The dredging for the Shipping Board and the Fleet Corporation, which are really one organization, naturally divides itself into two classes. The first is the dredging that is made necessary by the construction of ships. In some cases the plants are built, quite naturally, on firm ground and may be several hundred feet, or possibly 1,000 feet, more or less, back from the channel, and in order to launch these ships it is necessary to dredge a basin for them to slide into. Sometimes it is necessary to dredge a short channel to reach deep water from this basin. In other cases, these yards have been built on bayous or back from deep water, because the ground was more suitable for a shipyard, or the yard was put back on a minor channel in order to get near a town where labor would be more accessible. For some reason or other these plants are built back from deep water where dredging is necessary in order to get the ships out, and the dredging may be more than would be required for the commerce of the particular place. In fact, yards have been built requiring the dredging of a channel to deep water where there was practically no commerce, but all of those things were taken into account in locating the yard, and it was found more economical to put the yard where they did and do the dredging.

Now, practically all of that dredging is made necessary by reason of the construction of the ships themselves, otherwise it would not

be necessary, and the position that the Emergency Fleet Corporation takes with reference to all dredging of that class is that it is properly chargeable to the construction of the ships and comes out of the appropriations made for the building of the ships. That would, I suppose, eliminate from consideration here all dredging of that class. We have had estimates of yardage made by the local district officers and, through them, by the various firms that are having the dredging done and other local people, and up to about the 1st of December the total amount of dredging of that class was about 2,500,000 yards in various lots, from 1,000 yards up to 400,000 or 500,000 yards. Then, in addition to that, there was about, roughly, 1,000,000 yards at one of the large fabricating plants, which was made necessary simply to provide a basin into which to slide the ships. Then, due to the establishment of new yards since that time, the total amount of 3,500,000 yards has been increased to somewhat more than that. But I think the funds that the Shipping Board already has, provide for that dredging.

Now, as to the second class of dredging that the Shipping Board is interested in: This pertains to the dredging required after the ships are in service, after they are passing in and out with cargoes. The position, in general, of the Shipping Board, as I understand it, is that the necessity for dredging items of this class is best developed through existing channels. The Shipping Board really has no organization for initially developing the necessity for dredging projects of that kind and is depending upon the communities and shipping interests in the various localities to present the necessity for such dredging as well as depending on the War Department, which, of course, passes on all of these projects before they come to your committee. But the Shipping Board is interested in the items of dredging in this class because the Shipping Board is, of course, now the largest shipper in the country; and the board, I think, takes the stand that any projects that are necessary and that have not been sufficiently considered through other channels would be taken up by it. Now, so far as I am aware, not very many projects have come before the board of that class, and I think that if there are any particular projects that the committee has had placed before it, it would be necessary for us to take them up individually, investigate them, and make special report on them. I think we have made one or two reports of that kind already. I know that a letter was written on the subject of dredging at Long Beach, Cal., connecting the harbor at Long Beach with the harbor at Los Angeles, and there may have been others of which I am not aware. The letter from your chairman brought up the subject of Mobile Harbor, Ala.

The CHAIRMAN. As to the two features involved there, first, your shipbuilding program and whatever necessity may arise out of that, and, second, whether you have any recommendations to make as to the use of that harbor for commercial purposes.

Capt. BAKENHUS. The only project that is pending now, so far as my knowledge goes, and the only project that has been placed before the Shipping Board, is the one at Long Beach, Cal., which was brought up recently by a letter, I think, from a Member of Congress.

The CHAIRMAN. Probably Mr. Osborne or Mr. Lea?

Mr. OSBORNE. Probably by myself.

Capt. BAKENHUS. A letter was written by the General Manager of the Fleet Corporation, and I think the point involved in that was whether—

The CHAIRMAN (interposing). Have you a copy of that letter with you?

Capt. BAKENHUS. No, sir; I have not; but I will furnish you with one.

Mr. GRAY. Do I understand the gentleman to take the position that his board would merely hear these facts, have them placed before them, and then make their recommendations? In other words, it seems that is the attitude of your board, that you would have to have the facts placed before you as to the necessities of these projects and that then you would make your recommendations accordingly?

Capt. BAKENHUS. Yes; I think that is correct, except that if, in connection with the shipping business of the port, it would develop that dredging was necessary in any particular port, of course, the Shipping Board would feel free to take up a matter like that initially without anyone else bringing the facts before them, because it is possible that, due to the congestion of shipping in certain harbors or the congestion of rail transportation, or whatever it may be, it will be found necessary during the war to use ports for large ships that have not been used hitherto, and in that case if the Shipping Board found dredging necessary it would itself, of course, initiate a project through the proper channels.

Mr. OSBORNE. Now, that the captain has reached that point, might it not be advisable for him to take up Long Beach and explain the situation as it is understood by the Shipping Board?

The CHAIRMAN. Is it agreeable to you, Mr. Gray, that he take up the projects, one at a time?

Mr. GRAY. I am agreeable to that; yes.

Mr. OSBORNE. I only suggested it because Capt. Bakenhus brought it up first.

Mr. GRAY. As I understand, that is the only one that has been brought before the board?

Capt. BAKENHUS. Yes.

Mr. GRAY. At least the only one you have in mind?

Capt. BAKENHUS. That is the only one that has come to my attention.

Mr. GRAY. I am perfectly willing to have him explain the situation at Long Beach.

The CHAIRMAN. As to Long Beach, the committee would be glad to hear from you with any recommendation you may have to make.

Capt. BAKENHUS. The Long Beach project involves the dredging of the inside channel from Long Beach Harbor into Los Angeles or San Pedro Harbor. I understand there is now an outlet from the Long Beach Harbor to the sea which is subject to filling, as it quite naturally would be passing through a beach. I understand the War Department is favorable to the project. The city is to pay for the part of the channel which lies entirely within its limits, and my understanding is that the Government has been asked to pay for the connection of this channel to a part of the Los Angeles Harbor, the expense of which neither one of the cities is able to pay, for some reason or other. I think the Chief of Engineers, the Board of Engineers, and the local engineers have favored this project as a

whole, but my understanding is that one of the questions at issue is whether this channel may be considered a war measure and made particularly necessary due to the conditions existing now.

That is, I think, very largely a matter of judgment, and the Shipping Board in its letter took the stand that any project which would help shipping in general would favor the Shipping Board in its work, as this channel no doubt will, because it will give two outlets from the Long Beach Harbor instead of only one, and the new outlet will presumably be one that will be open at all times and will not subject shipping to the interruptions that might occur through the single use of the present channel. It will be somewhat difficult to say that this is a war project and yet it will not be easy to say that it is not a war project. The facts are that we are building some ships at Long Beach which would have to pass out through the existing entrance, and I understand the Navy is also building some submarines at Long Beach. Now, it undoubtedly would be an advantage if these ships could use the proposed new channel. There is no question about that. We would have two outlets where otherwise we would only have one and one would not be subject to filling in. The new channel, I also understand, would be very useful in solving local transportation problems, which are particularly important to the shipbuilding industry in Los Angeles as well as in Long Beach, and when I say Los Angeles, I mean Wilmington and the lower end of the city, where there are two or three shipbuilding companies located. I should say that the work of the Shipping Board would be helped along and be fostered by the establishment of this channel, and that it would be a good thing.

The CHAIRMAN. The letter from the Shipping Board, to which you evidently refer, is the one I have before me and which I will read:

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,

Washington, January 24, 1918.

Hon. JAMES D. PHELAN,
United States Senate.

DEAR SENATOR PHELAN: Your letter of the 23d instant, addressed to Chairman E. N. Hurley, relative to the desire of the Rivers and Harbors Committee of the House of Representatives for the expression of opinion as to the importance of the item of \$130,000, which is under consideration for the improvement of Los Angeles Harbor, to the general construction program of the Emergency Fleet Corporation, has been referred to me for reply.

I beg to advise that we have contracts as follows with shipbuilding plants in Los Angeles Harbor:

Eighteen steel vessels, Los Angeles Shipbuilding & Dry Dock Co., San Pedro.

Four wood hulls, Fulton Shipbuilding Co., Wilmington.

Four wood vessels, Ralph J. Chandler Co., Wilmington.

The total dead-weight carrying capacity of these vessels will be nearly 200,000 tons, and the total cost over \$30,000,000, including the California Shipbuilding Co. contract.

The shipbuilding facilities of Los Angeles Harbor are rapidly growing, and anything that will be of general benefit to the harbor, such as the proposed new channel, will tend to promote the shipbuilding industry.

Not far distant, at Long Beach, there is the California Shipbuilding Co., which, in addition to contracts with the Navy Department, has a contract for three steel vessels with the Emergency Fleet Corporation.

In general, I am pleased to state that work on all the contracts with the Emergency Fleet Corporation, in Los Angeles and vicinity, is being carried on with great energy, and is deserving of every encouragement.

Very truly, yours,

CHARLES PIEZ.

Vice President and General Manager.

If I were asked for an expression of opinion as to whether the communication constitutes a specific recommendation for the adoption of this project for the effectuating of the purposes of the Shipping Board, and, therefore, the war emergency, I would have difficulty in saying that it did constitute such a specific recommendation.

Mr. DEMPSEY. You would think it was neutral?

The CHAIRMAN. I would construe it a general recommendation as to the value of the project, about which we have no question, because it is set forth in the report of the Chief of Engineers, which report recommends this project.

Mr. OSBORNE. Do I understand that in order to meet your views in the matter it must be certified to as a vital question? Is it necessary to go to that extent; or, if you do not go to that limit, where do you divide the line and where do you make the distinction? They do recommend this as being valuable to the shipbuilding interests. Must it be absolutely vital to the shipbuilding interests of the United States; or, is not vital, where do you divide it?

Mr. FREAR. May we ask questions in order to secure some additional information?

Mr. OSBORNE. I would like an answer from the chairman on that point, as to where this dividing line comes.

The CHAIRMAN. When you ask, "Must the recommendations be to the effect that the adoption of the project is vital?" of course, that is an extreme view to take. That is for the Shipping Board to say whether, for the purposes of their activities, the expedition of an improvement heretofore adopted is necessary or the adoption of a new project is necessary. I take it that as to the reasons of the Shipping Board for that conclusion the committee would not be critical or require them to unduly enlarge their reasons for it in order to make it vital. The point I was making was that there was no recommendation whatever here; they simply tell us "that the shipbuilding facilities of Los Angeles Harbor are rapidly growing, and anything that will be of general benefit to the harbor, such as the proposed new channel, will tend to promote the shipbuilding industry." That might be said of almost any river or harbor in the United States upon which a shipbuilding plant was located.

Mr. OSBORNE. In the morning Post of to-day there is a brief statement that President Hurley, of the Shipping Board, had an interview with the President last night upon this subject generally—this subject of shipbuilding—and he laid stress on this point. The newspaper says:

The President was told by Mr. Hurley that bad weather in January cut construction of commandeered ships fully 60 per cent.

Now, I will ask the captain whether at Los Angeles and Long Beach it is not possible to work 365 days in the year?

Capt. BAKENHUS. Well, I understand that the weather conditions are very favorable, indeed, at Los Angeles; as favorable as anywhere in the United States. I could not say about working 365 days, but the weather conditions are certainly most favorable there.

Mr. OSBORNE. And there would probably be no loss of 60 per cent in efficiency at Los Angeles and Long Beach.

Capt. BAKENHUS. Not due to the weather; no.

Mr. OSBORNE. It bears on this question in a very important way. Our chairman says it might apply to any river and harbor in the

United States, but it does apply particularly to a place where you can build ships while other places are not able to do so on account of weather conditions. I would like to have this extract put in the record.

The CHAIRMAN. You may hand it to the stenographer and it will be printed.

Mr. OSBORNE. The rest of the article has no application, but the part which I desire printed is the following:

The President was told by Mr. Hurley that bad weather in January cut construction of commandeered ships fully 60 per cent.

Mr. FREAR. Would you not say, so far as the suggestion of Mr. Osborne is concerned, that the same would apply with equal force to Mobile, Pensacola, Beaumont, and other shipbuilding places?

Capt. BAKENHUS. You mean in the matter of weather conditions?

Mr. FREAR. Yes.

Capt. BAKENHUS. I think that wherever the weather is good and where the interruptions are fewer the conditions would be favorable to shipbuilding.

Mr. FREAR. Are you familiar with Long Beach?

Capt. BAKENHUS. I am only familiar with it since having looked into the question in the last few days.

Mr. FREAR. You have not been there?

Capt. BAKENHUS. No.

Mr. FREAR. The information presented to the committee is that the shipbuilding plants at Long Beach are about 1,800 feet from the sea and that the harbor is something like 18 feet in depth with a 7-foot tide which would give a depth of about 25 feet.

Capt. BAKENHUS. Yes.

Mr. FREAR. That the proposed canal here urged is 20 feet in depth and 5 miles around, and that the largest vessels now being built at Long Beach can be floated in about 14 feet of water. What reason impels you to think that this canal would help in the floating of the vessels any better than the present harbor entrance which is much nearer the sea, and which is of greater depth, with the tide?

Capt. BAKENHUS. I tried to make that clear when I said we would have two outlets instead of one, and that the new outlet would be much less subject to filling than the present outlet.

Mr. FREAR. Could not that be said about practically every harbor in the country, that two or three outlets would make them more convenient?

Capt. BAKENHUS. I think it would, undoubtedly, yes; although, perhaps, not to the same extent as here, because this present outlet, I understand—not from my own investigation, but from information I have received—is more or less subject to silting, and I can very readily see how that might be true from the formation of the coast line.

Mr. FREAR. But that is true of a good many of the other harbors of the country?

Capt. BAKENHUS. Yes; that is true of a great many of them.

Mr. OSBORNE. May I ask whether you know that this entrance did shoal this year and that the city of Long Beach expended \$35,000 of its own money in clearing the channel, and that the submarines that were launched there went outside and could not get back, but were compelled to lay up outside for some time: did you know that?

Capt. BAKENHUS. I am not fully informed on all those things, but I have heard of them.

Mr. OSBORNE. Well, that is the fact.

Mr. FREAR. In other words, it ought to be kept dredged at all times?

Capt. BAKENHUS. Yes, sir.

Mr. FREAR. Either by the Government or by private individuals?

Capt. BAKENHUS. Yes, sir.

Mr. EMERSON. What is meant by the Emergency Fleet Corporation?

Capt. BAKENHUS. That is a corporation organized by the Shipping Board, under authority of Congress, as a means of facilitating the construction of ships; it is a more flexible organization than we could have had in any other form, as I understand it.

Mr. EMERSON. It is entirely in the hands of the Government?

Capt. BAKENHUS. Absolutely; it is a Government organization entirely. The directors of the Emergency Fleet Corporation are members of the United States Shipping Board. It is merely a form of organization authorized by law.

Mr. FREAR. Are you building ships or letting contracts, or what is the scope of the work of the Emergency Fleet Corporation?

Capt. BAKENHUS. The Emergency Fleet Corporation lets the contracts for ships; that is, by authority of the Shipping Board, because all the contracts are subject to the approval of the Shipping Board. The Emergency Fleet Corporation does all of the work under the general policies of the Shipping Board.

Mr. FREAR. Does it determine in any way the establishment of a shipbuilding plant; that is, its location and such other conditions, or are those independent questions?

Capt. BAKENHUS. Well, that depends on the circumstances in any particular case. In various classes of contracts the Fleet Corporation has usually taken—in fact, has always taken—the stand that the ships should be built through private enterprises because the problem is too large for any organization to handle as a whole, and in a number of cases the contracts were made contingent on the site being satisfactory to the Emergency Fleet Corporation, and in cases like that we either approve or disapprove of a site until one is offered that is satisfactory.

Mr. OSBORNE. I do not want to take up too much time, but, with your permission, I will ask the captain to make a little clearer the point that, on account of the very considerable amount of construction being carried on by the Emergency Fleet Corporation and by the Navy in the Long Beach Harbor and in the Los Angeles Harbor, it is desirable to have this canal for transportation purposes; that is, the transportation of workmen; and in order to save the building of houses and all that sort of thing. There are now something like 20,000 men employed there in the shipbuilding business. I would like to ask the captain whether he does not consider the construction of this canal a matter of very considerable importance to the building of these ships and at an expenditure of only \$130,350?

Capt. BAKENHUS. Well, I should say that anything at all that facilitates the transportation of workmen to and from the shipyards is a very good thing because that is one of the problems we have at

these various points, that is, the bringing of the men to their work and getting them home again. The shipyards have necessarily been located on or near the water front, and these locations are sometimes not in the built-up districts of the cities, and the transportation facilities, in a good many cases, have been insufficient. I am not personally familiar with the conditions that exist at Long Beach and Los Angeles, except what I have seen from the maps that were shown to me, but it is true that this proposed channel is in a direct line from Long Beach to the shipbuilding plants in Los Angeles, whereas the other transportation routes are roundabout. So that it might easily be that this canal would help in the transportation of workmen to and from the shipyards.

Mr. OSBORNE. I will state that on account of this work and on account of the great number of men employed at Los Angeles, at San Pedro, and Wilmington there is not a vacant house, and it will probably be necessary for the Government to spend some money to provide housing facilities for the workmen—that is, unless something of this kind is done.

Mr. BOOHER. If that canal were cut through there would it do away with the spending of any money for houses?

Mr. OSBORNE. I rather think it would. I think we could get along without any money if that canal were put through.

Mr. DEMPSEY. One of the gentlemen made the statement yesterday that if this appropriation were made they would agree at once to begin the construction of houses, and that they would get at it as speedily as it was possible to do it. I believe that statement was made by one of the gentlemen representing Long Beach.

Mr. BOOHER. Was that stated yesterday?

Mr. DEMPSEY. Yes; that statement was made by one of the representatives of Long Beach or Los Angeles, I have forgotten which. They said it would cost the Government no money at all for houses, and that they had private capital ready to invest, and that they were anxious to build.

The CHAIRMAN. Before we leave Long Beach, I would like to make this statement to the Shipping Board, through you: That if the Shipping Board has any specific recommendations to make as to the necessity for making this improvement connecting Los Angeles with Long Beach, that the committee would be very glad to have them, with the suggestion that such recommendations be submitted as early as possible. Now, we will take up Mobile Harbor. Do you prefer that Capt. Bakenhus make a statement or would you like to submit questions to him, Mr. Gray?

Mr. GRAY. I would like to have him first make a general statement.

The CHAIRMAN. I will make this general statement about the status of it. Captain, the present project at Mobile is for a depth of 30 feet across the bar and from thence a channel 27 feet deep, of appropriate width, up to the city of Mobile, or, accurately, I think, Chickasaw Creek. The committee adopted a new project in the last bill which proposed to increase the depth across the bar to 33 feet and the depth of the channel from the bar up to Mobile or Chickasaw Creek of 30 feet, of appropriate width. No appropriation toward the new project was made in the last river and harbor act, which adopted the new project.

The War Department, through the Chief of Engineers, recommended appropriations, for inclusion in this bill, for Mobile Harbor of \$160,000 for maintenance work and \$100,000 for the new project, and submitted reasons which, in their opinion, justified them in limiting the appropriations to those amounts. Representatives in Congress, both members and not members of the committee, and a delegation from Mobile have appeared before the committee stating that the appropriation of \$100,000 toward the new project was not sufficient, and that, in their opinion, it was necessary to expedite the completion of the new project, thereby requiring an enlarged appropriation. Among other reasons given in behalf of the enlarged appropriation were two in particular. One was that the shipbuilding industry there, on behalf of the Shipping Board, required this increased depth, and the other one was that the class of ships which you were building, and which were intended to engage in the overseas trade, were of such a size and draft, when loaded, as to require an increased depth and, therefore, the expedition of the work of improvement. The purpose now is to ask the Shipping Board, through you, as its representative, whether it has any recommendation to make or not in that respect, and the reasons therefor, if you are prepared to do so, and if not so prepared, state when you will be prepared.

Capt. BAKENHUS. You have stated the case very clearly. I have not had an opportunity to investigate the merits of this case at all. I had a brief conference with one of the officials of the Shipping Board last night on this general subject, and from the knowledge I have I do not believe the Shipping Board is prepared at this moment to make any recommendation one way or the other on this project in advance of investigating the facts in the case. I think it would be well to give us a little time in which to look into this matter.

The CHAIRMAN. About how much time do you suggest?

Capt. BAKENHUS. I should say three or four days, if there is as much time available as that.

The CHAIRMAN. But earlier if you can.

Capt. BAKENHUS. All right, sir.

The CHAIRMAN. Then, at this stage, let me make this statement to the committee: The committee passed a resolution last week, Thursday or Friday, providing that the chairman be directed to request the attendance before the committee of representatives of the Shipping Board, specifically Mr. Hurley and Mr. Franklin. In order that the committee may know that their direction was complied with—and I will ask the attention of Mr. Dempsey particularly, as it was on his motion that the resolution was passed—I will read the letter which I wrote on February 2, last Saturday:

FEBRUARY 2, 1918.

Mr. EDWARD N. HURLEY,

Chairman United States Shipping Board, Washington, D. C.

MY DEAR SIR: I am writing you as chairman of, and in behalf of, the Committee on Rivers and Harbors of the House of Representatives. The committee are now engaged in the consideration of and in formulating the annual river and harbor bill. By direction of the committee I wish to submit to you a brief statement, followed by a request.

1. *Mobile Harbor, Ala.*—In the last river and harbor act, approved August 8, 1917, there was a new project adopted for this harbor. This new project increased the depth over the bar from 30 to 33 feet and increased

the channel depth in the bay and up the river to the city of Mobile from 27 to 30 feet, at a total estimated cost of \$1,030,000. No appropriation was made on account of this new project in the last river and harbor act, but there was an adequate appropriation for maintenance. The Secretary of War and the Chief of Engineers have recommended for inclusion in the pending bill an appropriation of \$160,000 for maintenance and \$100,000 for the improvement on the new project.

The Representative in Congress from the Mobile district, Hon. Oscar L. Gray, has insisted that the improvement for the increased depth should be expedited, and that an appropriation greater than \$100,000 should be made in the pending bill. A delegation from the city of Mobile appeared before the committee on yesterday (Friday) and further urged an increased appropriation for expediting the work on the new project. The War Department stated that they are dependent upon Government plant for the prosecution of this work, and that the appropriation of \$160,000 for maintenance and \$100,000 toward the new project is all that can be profitably expended with the available Government dredges. The War Department further took the position that it is unwise to undertake to build new dredges at this time, and they further stated that it is also unwise to undertake to have this work done by contract owing to the greatly increased cost by this method.

Among other arguments submitted by the delegation from the city of Mobile they contend that the Chickasaw Shipbuilding Co., and probably other shipbuilding plants at Mobile, were building ships under the authority of the Shipping Board which would require a greater draft than the existing depth of 27 feet in the river channel from the city of Mobile and 30 feet over the bar. If the Shipping Board should state that they need a greater depth of channel, and should make such representations to the Secretary of War and the Chief of Engineers, then undoubtedly the Secretary of War would recommend for an increased appropriation as a war exigency, and under such circumstances I believe the committee would respond to such a recommendation from the Secretary of War.

2. The committee further expressed the desire to hear from you not only with relation to the needs of the Shipping Board for greater depth of channel at Mobile Harbor but at other ports or rivers in the country, and I was directed by the committee to request you to appear before the committee on a mutually convenient date. It was suggested by one member of the committee that Mr. Franklin, who has recently become connected with the Shipping Board, would be an appropriate witness at the hearing. In this connection may I suggest that the committee will be glad to hear from any other officials of the Shipping Board at the same time whom it would be your pleasure to designate. I suggest next Wednesday morning, the 6th instant, at 10.30 o'clock, as an appropriate time for the hearing.

I am sending this by special messenger, and I beg the favor of a reply on Monday, which I would be glad to receive on that day.

Very sincerely,

JNO. H. SMALL, *Chairman.*

About 11 o'clock Monday morning I called up Mr. Hurley and he had just returned that morning. I think he said, from New York, and had not yet seen the letter. He read the letter and either called me up very soon afterwards, or in the same conversation, I forget which, and said the request of the committee would be complied with. I desire the committee to know that their direction was complied with by the chairman; and, I think, that is a fair statement of what the committee desired.

Mr. FREAR. There is a question I have in mind which the captain may be able to answer, and it will, no doubt, give information to all of us. What depth is necessary for the launching of the various sized boats? Could you tell us briefly?

Capt. BAKENHUS. The ships we are building are of different sizes, and the depth required for launching purposes varies with the launching conditions, and it will vary with the tide we have. In Newark Bay we always launch at high tide, and my recollection is

that there we have a depth of 12 feet at low water and a depth of 16 or 17 feet at high water, and that that is the amount necessary for the launching of those ships.

Mr. FREAR. How large are those ships?

Capt. BAKENHUS. How large are they, Mr. Jones?

Mr. JONES. Dead-weight capacity, 5,000 tons.

Mr. LEA. How much water would it take for an 8,800-ton ship?

Capt. BAKENHUS. I have not that information here.

Mr. DEMPSEY. It is important to use these ships after you launch them. It will not do a great deal of good to merely launch them, will it, Captain?

Capt. BAKENHUS. No.

Mr. DEMPSEY. You will have to load them and get them in and out of the ports with loads?

Capt. BAKENHUS. Yes.

Mr. DEMPSEY. And that is the real question, is it not—the depth of water you need for these boats loaded to capacity?

Mr. FREAR. My point was directed to the location of shipyards at places where there might be no commerce. What I had in mind was the depth of water needed to launch the various sized vessels. Of course, commercial conditions will vary, dependent on the port.

Mr. BOOHER. In the hearing, as I remember it, we were told that they were building 10,000-ton vessels there.

Mr. TURNER. Nine thousand six hundred ton vessels.

Mr. BOOHER. Is the depth of water you suggest enough to launch a boat of that size?

Capt. BAKENHUS. You mean boats of 9,600 tons at Newark?

Mr. TURNER. No; at Mobile. I think I could facilitate this hearing if you would allow me to say about three words.

Capt. BAKENHUS. I do not think I have data with regard to ships that are being built there.

Mr. DEMPSEY. Just assume 9,600 tons for the purposes of the question. Then the question is, first, whether the depth is sufficient to launch them, and, second, whether it is sufficient to accommodate them loaded to capacity in and out of a channel 200 feet wide and 27 feet deep.

Mr. TURNER. The question is. What is the dead-weight tonnage of that type of boat?

Capt. BAKENHUS. I think that must be the dead-weight tonnage.

Mr. TURNER. No; the dead-weight capacity or draft.

Capt. BAKENHUS. I have the information as to various ships here, but I do not happen to have information as to that type. The load draft of a 10,000-ton ship is 30 feet.

Mr. FREAR. That is, loaded?

Capt. BAKENHUS. Yes, sir.

Mr. FREAR. What is it empty and without a load?

Capt. BAKENHUS. The draft without a load amidships is 12 feet 6 inches. Then we have a 9,500-ton type of ship of which the load draft is 26 feet 10½ inches, and the light draft amidships is 9 feet 3 inches; the light draft forward is 6 feet 8 inches, and the light draft aft, 11 feet 10½ inches.

Mr. FREAR. That is for a ship of 9,000 tons?

Capt. BAKENHUS. Nine thousand five hundred tons.

Mr. SWITZER. The question with me is as to whether Mobile will be a port which will be used, and to what extent, in sending supplies to our Army; in other words, to what extent it will be a port of imports and exports?

Mr. DEMPSEY. For war purposes?

Mr. SWITZER. Well, for mercantile purposes. The extent to which it will be used will have a great bearing with me in this matter because, I assume, if it is going to be used very extensively there will be all types of ships entering this port. Now, I would like to know, from the representative of the Shipping Board, if he is allowed to tell, and knows, whether they expect, within the next year, to use the port of Mobile for the purposes I have indicated and, if so, to what extent. I would be glad to have that information.

Capt. BAKENHUS. I am unable to answer that because I am not connected with the department that has such matters in charge.

Mr. SWITZER. If they are not going to use the port, I do not think it is necessary for us to increase the appropriation. If they are going to take all of the vessels away from the port, I think there is probably enough water there to launch the ships as built.

Mr. GRAY. As I understand it, Mr. Switzer, it is not merely a question of launching a vessel but it is a question of filling it to her capacity with goods needed in this war and then getting out.

Mr. SWITZER. But if they are not going to use the port, they will not fill the ship with goods at that port.

Capt. BAKENHUS. As I explained when I began, dredging divides itself into two classes. One pertains only to the building of ships, and the other to handling, after they are in service, loading, etc.

Mr. BOOHER. Captain, suppose the bottom of the harbor is muddy, or a sandy bottom, could the ship get through easier than it could if the bottom were rocky, or a rough bottom?

Capt. BAKENHUS. Why, I should say yes, because if the bottom were rocky, and if the ship should happen to touch, it might be serious, but with a mud bottom she might easily slide over.

Mr. BOOHER. Can you make a channel through the mud, if you load it down, and go right on through the mud bottom?

Capt. BAKENHUS. Of course, it will retard the progress of the ship, but if she has power enough to overcome that additional friction she can go through, but she would be taking her chances, of course.

The CHAIRMAN. Now, gentlemen, Mr. Turner wishes to propound some questions to the captain, which I think will be agreeable to the committee.

Mr. TURNER. I wanted to make an explanation that I thought might lead the hearing into what is the pertinent part of this whole matter.

The CHAIRMAN. Mr. Turner is a representative of the commercial interests of Mobile.

Mr. TURNER. I made the statement here that the type of ships that were to be built at Mobile by the Steel Corporation, 9,600 tons dead-weight, could not load a cargo at Mobile and get out—that is, with pig iron and steel mixed with other things. The heavier type of ships that are being built by the Shipping Board and being built by Great Britain, can not come to Mobile and get a cargo and load to their capacity and get out on 27 feet.

I want further to introduce as evidence in the hearing a communication from a representative of the Leland Line, which is the representative of the British ministry of shipping, in which he showed the dead-weight or capacity of boats coming into Mobile, and of the Leland Line boats, out of 44 only 9 could come to Mobile and load to their dead-weight capacity and get out. I tried to urge upon the committee the necessity of having built at Mobile and at every other port that did not have 30 feet of water, at least the improvement of the harbor, because they can not get these ships in there. I further introduced into the record, and I would like to call attention to that now, that there is not one of the N type of Leland Line boats that can come into Mobile and load to its capacity. They come in and take on a part of their cargo, and then go to New Orleans, or some other place, to complete the cargo. There are only 9 out of the 44 vessels in the fleet of the Leland Line boats that can come into Mobile Harbor with the present depth. That is simply an example, and it is indicative of the type of ships being built of 8,000 tons or 10,000 tons, because the net register of this type of boats is only 4,000 net register.

They are all around 4,000 tons net register, that type of boat, and carry 8,000 tons, and can not load at Mobile or any other port.

Another thing we emphasized is that a port which has fresh water loses 6 inches thereby; that is, a boat that will draw, we will say, 28 feet at Mobile would draw but 27 feet 6 inches at Pensacola, on account of the buoyancy of the salt water.

We further emphasized the fact, and the chairman called attention to the fact that the Government was planning to send coal there by barges on the river, and bring coal down the river, in order to relieve the present coal situation. The type of boats that load in New Orleans and Galveston at 30 feet can not go into Mobile and take bunker coal and go out on 27 feet. It is an impossibility.

We further emphasized the fact, and I want to emphasize it here, so that it can be considered by the Shipping Board, because to me it is the most vital thing of all. If the ports of the South Atlantic and the Gulf can be speeded up to 50 per cent more than they have for handling the congestion, and when I say ports I am referring to the warehouses and terminals and the terminal railroads, and if those warehouses can be made to handle through them into the ships, they will be able to handle 50 per cent more cargo than they have ever handled before in their history. I do not believe that is possible with Government management, because we are losing efficiency instead of making it, but if they can come up to 50 per cent more than what they have handled before, all that can be handled between Charleston and New Orleans, according to my estimate, is 10,000,000 tons, and all that can be handled by the Texas ports, with this 50 per cent efficiency over and above what they have handled in the past, is 5,000,000 tons.

I believe the Shipping Board states that they are to turn out something like 3,000,000 tons net register, or 6,000,000 tons dead-weight. If they only make nine trips a year, a trip every 45 days on an average, from the South Atlantic and Gulf ports, or only average up a trip and a half, there is 54,000,000 tons. Great Britain is building a fleet just as great as we are, of the type of ships like these Leland Line ships, and bigger, because they are building them larger all

the time, and that type of boat has got to come here and load and take the stuff out. I was told only five days ago that the British are coming more and more to send their ships down to the Gulf to get flour and grain. I can not see anything but 100,000,000 tons at least, and we have got to keep these ships moving, and in order to get those 10,000,000 tons through I think no South Atlantic port can be spared. Not only do you want them dredged, to take care of these fleets, but you want somebody of this Government to build terminals to take care of all this freight that is coming to these ports.

Mr. FREAR. I think we all concede what you have said about it; we all know that Mobile is a good harbor, and is an important harbor, but have you any understanding, from your studies, of the various depths of these harbors, for instance, Savannah, Galveston, and Charleston, as compared with Mobile and New Orleans? How does your harbor compare in depth with them?

Mr. TURNER. We are the only one that is behind them. We have got a 27-foot channel in fresh water, which is a 6-inch disadvantage, as against ports whose tonnage does not amount to one-fifth or one-sixth of some of your ports. Galveston has got 30 feet, Texas City 30 feet. I introduced it all in the record; it is all in the record. But I will make the statement that every port has 30 feet of water except Mobile; every one of these ports along the South Atlantic has 30 feet of water, except ports like Savannah, which has 28 feet plus 6 feet 6 inches at tide, which lets them go out in 34 feet 6 inches at high tide; every last one of them, with the single exception of Tampa.

Mr. FREAR. Jacksonville?

Mr. TURNER. Jacksonville has a 30-foot project, and they have got the tide. You must always consider that. We have a 1.1-foot tide, and when a norther blows, not only will you lose the tide but you will lose 1.4 feet below that. In other words, we will have a 3 to 4 foot drop when a norther blows. Our tide is not a regular tide like Atlantic points.

Mr. FREAR. Then you need a 35-foot depth to put you upon an equality if you have to lose with a norther.

Mr. TURNER. We do need it. We have got the dead-weight cargo, and we have got a big tonnage, and the reason we do not get it is because it costs a little money.

The CHAIRMAN. May I make this suggestion? Quite a good part of what Mr. Turner is presenting to the committee was presented on the hearing the other day of Mobile, when we were considering Mobile Harbor, and I suggest this is merely cumulative. Now, is not that an argument to be presented to the operating department of the Shipping Board as to the extent you will find it necessary to use Mobile and these harbors? Is it not a question for their consideration? We have had this before us, and we can consider it.

Mr. TURNER. Yes; Mr. Chairman; but I was trying to avoid asking the gentleman a question about whether Mobile wanted deep water to launch ships. We do not. We want deep water to handle the commercial necessities of the ports, to get United States war supplies to Great Britain, and, if necessary, use them, and they can not help but use them, and they are not going to have ports enough to move the goods, and we want the channel dredged, so that you can use the type of ships of 4,000 tons register that can not go there now.

Capt. BAKENHUS. I would like to add at this point, with your permission, Mr. Chairman, that we had considered this question of Mobile Harbor, but there are so many elements involved in it that have come out this morning that I do not feel it was given perhaps as much consideration as the importance of the project warrants, and with a little more time I think the Shipping Board could give something more definite than it can at the present time. This has been the subject of investigation by the War Department, and they have reached a certain conclusion, and if our conclusions were different we ought to have the very good reasons for it, and base it on a very thorough investigation.

Mr. DEMPSEY. I am going to suggest in that connection that I do not think you ought to start out with the conclusion of the War Department as your beginning at all. I think it should be submitted to you as an original proposition, because you might very readily, out of deference to the War Department, not wanting to disagree with them, reach a conclusion which would be entirely different from that which you would reach if you took it up as a matter of original investigation.

Capt. BAKENHUS. Absolutely I think you are right.

Mr. DEMPSEY. If I had been submitting it to you, I would not say anything about what the War Department had concluded. I would say, "Here is your proposition, and what do you say about it?"

Capt. BAKENHUS. But the committee desires all this information in the shortest possible time, and I know there is a great deal of information in the War Department that we could get hold of, and having obtained that, of course, we would probably get the conclusion as well as the data on which they based the investigation, and taking the same data and facts, we would have to have a little time to digest them and study them from our point of view, which is possibly different from that of the War Department, because the situation changes so rapidly from day to day now that conclusions that were reached a month ago might be different now. I am not pretending to predict what they will be.

Mr. SWITZER. Has the Shipping Board the machinery or facilities for ascertaining as to how the exports are going to be distributed that are expected to be sent from this country in the next year? Has it any control over that? Is there any machinery within its jurisdiction that will have any control over the disposition of these exports that are sent away from this country. In other words, will they have authority to direct what shall go from the port of New Orleans, Galveston, or other ports?

Mr. DEMPSEY. It is my understanding that Mr. Franklin is to have absolute control of this tonnage for that specific purpose.

Mr. SWITZER. I would like to have a little information on that line as to what they propose to do.

The CHAIRMAN. May I suggest, Captain, that you say to the proper officials of the operating department of the Shipping Board, in considering Mobile, if they desire to consider Long Beach further, that there are representatives here from both of those ports, representing those projects; and if you will communicate with Mr. Gray, he will put you in touch with the representatives from Mobile, and Mr. Osborne, a member of the committee, whose home is in Los An-

geles, will put you in touch with the gentlemen who are here in connection with the Long Beach proposition, so that they may feel they have had an opportunity for a full hearing.

Capt. BACKENHUS. We have already seen some of the representatives of Long Beach. I would be very glad to make an appointment with the representatives of Mobile at this time. Two o'clock would be a very good time for me.

The CHAIRMAN. That is a matter that you can take up personally with them.

Mr. OSBORNE. There is just one question I wanted to ask, and it is not original either. The suggestion was made by my colleague, Mr. Lea, but it seems to me very pertinent. That is, when you have your mercantile fleet constructed, have you got ports enough, port facilities enough, in the United States, to keep that fleet going? Is it not necessary to have just such places as Mobile open in order to use the fleet?

Capt. BAKENHUS. That is a very good question.

The CHAIRMAN. We had intended to make some inquiry as to the proposition brought up by Mr. Switzer at Mobile as to the distribution of ships at these ports. For instance, the newspapers are full of suggestions that New York Harbor is crowded beyond capacity, and Philadelphia is saying, "Why do you not give more of this overseas shipping to our port?" and Baltimore is asking the same question, and the other southern ports, Norfolk, Wilmington, Charleston, Savannah, Jacksonville, and the Gulf ports, Mobile, New Orleans, and Galveston, are asking the same question. But I am assuming, from a statement you made awhile ago, that you can not answer inquiries upon that phase of the matter, but that it is a matter for the operating department.

Capt. BAKENHUS. I would rather leave that to the operating end of the Shipping Board, because they could answer questions much more satisfactorily.

(Whereupon the committee adjourned.)

STAMFORD HARBOR, CONNECTICUT

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF STAMFORD HARBOR CONNECTICUT

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 19, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

STAMFORD HARBOR, CONNECTICUT.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES.

Washington, D. C., Saturday, January 19, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

The CHAIRMAN. The committee will come to order. Gentlemen, Mr. Merritt is here with some other gentlemen to present a matter to the committee, in connection with the improvement at Stamford. Mr. Merritt, you may proceed.

STATEMENT OF HON. SCHULYER MERRITT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CONNECTICUT.

Mr. MERRITT. Mr. Chairman, this relates to the improvement of the harbor of the city of Stamford. The former project was completed in 1911, and that project was a continuation of private work, which had been done by private enterprise in the city of Stamford. There are on both sides of the harbor, on the east branch and on the west branch, railway tracks connecting with trunk lines——

The CHAIRMAN. What is the project you are speaking of, Mr. Merritt?

Mr. MERRITT. I am presenting the project, sir, which was recommended to this committee in a letter from the Secretary of War in 1914. I have it with me.

The CHAIRMAN. Give the stenographer the number of it.

Mr. MERRITT. No. 1130.

The CHAIRMAN. House Document 1130. Sixty-third Congress. second session.

Mr. MERRITT. That is right, sir.

The CHAIRMAN. The members will find the existing project discussed on page 195 of the Annual Report of the Chief of Engineers.

Mr. MERRITT. I do not need, Mr. Chairman, to take the time of the committee to go into details, because those are all set forth in a letter to the Secretary of War, which I take it the committee will examine at their convenience. I will merely say that the importance of the harbor is indicated by the fact that in the last report of the Chief of Engineers for the year 1916 the water-borne commerce is given as \$22,000,000. Stamford, like many Connecticut towns, has grown tremendously in the last two or three years, and there have been important industries established there, connected with chemistry and with war, as well as the ordinary manufacturing which is carried on in Connecticut.

Now, the particular importance, it seems to me, of the harbor of Stamford is because it is at the very throat of New England. That

is to say, no railroad freight can possibly get into New England from New York except through Stamford, which is the only connection, and one which can not be enlarged, because all the way from New York it is a thickly settled country, so that practically the railroad facilities which now exist are as much as can be had, so it is extremely important to relieve that congestion.

Now, the present project provides only for a depth of 9 feet in the east harbor, and as the barges carrying coal increase in size, it decreases the possibility of getting those barges into the harbor, because they will not come when the water is so shallow, on account of the possibility of having to lie in the mud, or possibly hitting on a rock.

That really is the whole question. It depends on what principle of action this committee adopts, whether it is worth while to start on this project for Stamford. If you believe in relieving the railway situation in New England, this is the proper place to start. If you do not, I am not asking any special consideration for Stamford as opposed to any other place.

The CHAIRMAN. Now, enlarge on that, Mr. Merritt. You say it is important. Why?

Mr. MERRITT. It is important, sir, because, in my view, it is important to relieve the railways of all this heavy, bulky freight which can be carried by water, and Stamford being only 30 miles from New York, it is an ideal place to begin that relief. It is true that that is a fact all along the sound, but Stamford is the first commodious harbor after leaving New York, on the Connecticut shore, on the shore where the New Haven Railroad operates. Therefore, it seems to me, it is very important to make that harbor at least of the depth as pointed out in the report of the engineers, so that when the Erie Canal comes to be used, the barges which navigate in that canal, and which will require a depth of 12 feet, shall be able to get into that harbor. I think that is the chief point.

Mr. BOOHER. Mr. Merritt, why do the engineers in this report recommend that the channel in the east branch shall be 12 feet in depth and in the west branch only 9 feet in depth?

Mr. MERRITT. You will find, if you will read further, that the reason for that is that in the east branch there is a muddy bottom, and in the west branch it is underlaid by rock in many places, which would make it extremely expensive. As a matter of fact, the east branch has borne the bulk of the commerce. There are two branches, like the prongs of a tooth, so to speak, coming into the main part of the harbor. One branch runs one way and the other the other.

I think that is all I need to say, Mr. Chairman, unless some gentleman wishes to ask any further questions. It is really a matter of policy for the committee.

The CHAIRMAN. Mr. Merritt, the committee, you understand, feel it incumbent upon them to restrict this bill as much as possible.

Mr. MERRITT. Yes, sir.

The CHAIRMAN. Suppose you enlarge your statement upon the necessity of adopting this project now, instead of waiting; in other words, the reasons for the urgent necessity of adopting it now.

Mr. MERRITT. Well, Mr. Chairman, I do not know that I can say anything further on that subject, other than the fact of the general

urgency of relieving railway congestion, which is very great in New England, as you all know. There has been embargo after embargo on freight, and you can not get a pound of freight up from New York, many times, except by water.

The CHAIRMAN. That is quite appropriate.

Mr. MERRITT. And, as I say, any relief at the throat of that great New England system, it seems to me, is going to improve the circulation of the whole system, obviously. I do not think any argument needs to be made to show that. If you gentlemen will get that in your minds that the whole rail system of New England comes together and flows through this narrow throat into the State of New York you will perceive the great necessity of keeping that throat clear.

Mr. FREAR. What percentage of coal going up north of New York takes this course that is needed up in New England, say up in Massachusetts?

Mr. MERRITT. Some of the eastern New England coal and the northern New England coal comes by rail over the Poughkeepsie Bridge. I think all the southern New England coal, as a rule, comes by rail to New York and then is taken to New England either by barge or rail shipments.

Mr. FREAR. Does all that pass through Stamford, or does some of it keep outside to Boston?

Mr. MERRITT. Some of the barge and vessel coal for eastern points goes through the sound direct from New York, but the railroad coal all goes through Stamford. They are now using the Pennsylvania tunnel coming under the North River, and under the East River, and over the Hell Gate Bridge, which perhaps you are familiar with.

Mr. FREAR. A railroad is through there?

Mr. MERRITT. They now connect with the Pennsylvania Railroad, so that they do not have to take to water, but all such coal goes through Stamford, because the Harlem River branch of the New Haven road connects with the Pennsylvania road, and that at New Rochelle comes into the main line, which goes through Stamford.

Mr. FREAR. Is Stamford a receiving point, or simply a distributing point?

Mr. MERRITT. Largely a receiving point, but something of a distributing point also. Lumber comes in there and is distributed from there up through the western part of the State.

Mr. FREAR. I see that the population of the city is stated here to be 25,000 people. You say it is perhaps greater than that now? Is it more than 25,000 people now?

Mr. MERRITT. I have the census that I received from the State capitol the other day, and not in connection with this case at all, so they were not trying to swell it, giving the population as 35,000. It has increased very rapidly in the last four or five years.

Mr. FREAR. Do you have any boat line operating around Stamford and supplying, for instance, the needs of the country for coal and all that sort of thing?

Mr. MERRITT. This town of Stamford, Conn., occupies, if you gentlemen remember the map of Connecticut, a little throat that sticks out into New York, and all that country which runs about 8 miles

north of the sound is supplied by Stamford. It is a very thickly populated region?

Mr. OSBORNE. You consume an immense amount of coal there, do you not, in manufacturing plants?

Mr. MERRITT. Yes; we do.

Mr. OSBORNE. How much money do you ask?

Mr. MERRITT. This project calls for \$183,000.

Mr. DEMPSEY. Would that give you a depth so that the coal barges could come in there?

Mr. MERRITT. Yes, sir; that would give 12 feet at low water.

Mr. DEMPSEY. That would be enough so as to enable the coal barges to come in there?

Mr. MERRITT. Yes. The average rise is about 5 or 6 feet.

Mr. DUPRE. Was this harbor covered in the bill that failed of passage in the Sixty-fourth Congress, second session?

Mr. MERRITT. I do not think so.

Mr. FREAR. Have you any public wharves there at Stamford?

Mr. MERRITT. None that belong to the municipality; no, sir.

Mr. FREAR. Why not?

Mr. MERRITT. There is a project of that sort under way. The city does own considerable wharf frontage on the east side, and there is a very strong movement now to have that made into public wharves, on the east branch. The city needs a place there for a pumping station, and had just bought considerable new frontage. I believe that there will be a public wharf there.

Mr. FREAR. The report states they are all private wharves, exclusively owned.

Mr. MERRITT. Yes, that is true. There is a wharf which is practically a public wharf now. Although it is privately owned, it is not in private use, and anybody that wants to come there can come. There is, in the sense that you have in mind, sir, no public wharf as yet.

The CHAIRMAN. Would there be any objection, if the committee should adopt this project, to make a condition that municipal terminals should be constructed satisfactory to the Chief of Engineers, or provision made for their construction?

Mr. MERRITT. Using the railway connections? Would that be what is in your mind? That is practicable. Personally, I believe in the principle, Mr. Chairman, if you are asking me as a citizen. I am not authorized to represent the community in that respect, but I think I would entirely approve of that principle.

The CHAIRMAN. An adequate water terminal should have a belt line connecting it with the railroad?

Mr. MERRITT. Yes, sir. We have, in fact, railroads on both sides of the east branch, and on one side of the west branch.

The CHAIRMAN. It would be very little trouble to connect them up with your terminal?

Mr. MERRITT. I think so.

The CHAIRMAN. What information can you give us, Mr. Merritt, as to the established water transportation lines, say with New York?

Mr. MERRITT. Well, there is a daily steamboat line that runs always one boat one way each day, and in times of stress two boats.

The CHAIRMAN. Between Stamford and what point?

Mr. MERRITT. New York.

The CHAIRMAN. Are there any steamboat lines running further east?

Mr. MERRITT. From Stamford?

The CHAIRMAN. Yes.

Mr. MERRITT. No, sir, the whole connection of Stamford is with New York. It is practically a part of the manufacturing district of New York.

The CHAIRMAN. Is this an established steamboat line which operates its boats upon a regular schedule?

Mr. MERRITT. Oh, yes, sir, and has been for years, and has never failed.

The CHAIRMAN. I see by the records that the water commerce at Stamford for 1916 was 401,359 tons, with a valuation of more than \$22,000,000.

Mr. MERRITT. Yes, sir.

The CHAIRMAN. Gentlemen, Mr. Merritt is presenting a very interesting subject. Are there any questions by any member of the committee? Mr. Dempsey?

Mr. DEMPSEY. I see, on the whole, it has been increasing, although it has gone back at times. On the whole, since 1912, there has been a fairly steady increase of tonnage.

The CHAIRMAN. Yes. Are there any other questions, gentlemen? Mr. Merritt, we are glad to have heard you. The matter will be brought to the attention of the committee.

Mr. MERRITT. Thank you, Mr. Chairman. I have a little summary here that I will leave with the clerk.

The CHAIRMAN. Yes; leave that.

(Whereupon the committee proceeded to the consideration of other business.)

(The statement referred to above is as follows:)

HOUSE OF REPRESENTATIVES,
Washington, D. C., January 17, 1918.

COMMITTEE ON RIVERS AND HARBORS,
House of Representatives.

SIRS: Referring to H. R. 8627, I respectfully point out that this project is one which was recommended by the engineers of the War Department in 1914. It is an enlargement of a project which was completed in July, 1911, and that project was one which enlarged an important improvement to Stamford Harbor, which was carried out by local and private enterprise.

It is also true that through private enterprise proper railway facilities have been provided for both the east and the west branch of the harbor in substantial accordance with correspondence between the Hon. John H. Small, chairman of the Committee on Rivers and Harbors, and the Hon. Newton D. Baker, Secretary of War, in October, 1917.

The last report of the Chief of Engineers shows that the water-bound commerce of Stamford for the year 1916 was over \$22,000,000. The importance of the harbor facilities needs no emphasis at the present time, not only for the sake of the locality which the particular harbor serves but also for relieving the congestion of railway carriage and thus helping an entire section and indeed the whole country.

Stamford is the first fairly commodious harbor on the west side of the Sound after leaving City Island, N. Y., and, as is pointed out by the engineers, in order to accommodate the increased size of barges which will use the enlarged Erie Canal it is essential that the depth of the channels be increased as indicated in the engineers' report.

Very respectfully,

S. MERRITT.

(The following letters were filed by Mr. Merritt with the committee on January 29, 1918:)

JANUARY 24, 1918.

HON. SCHUYLER MERRITT,

House of Representatives, Washington, D. C.

MY DEAR Mr. MERRITT: I received your letter of the 22d and have had an interview with Mr. Nash this morning, at the office, and have gone over the map which he has of the East Branch of the Stamford Harbor. He is going to make a tracing of this map which will show the amount of waterfront which the city will have at the disposal station. There is about 1,000 feet of waterfront as I understand it. He says that the city has under contemplation the building of a public wharf there and there is a project under way now, which contemplates the building of a spur track running down to the Gillespie Rubber Plant, which is below the proposed disposal dock. This will afford rail communication to the city property. I asked him to write you a letter stating these facts as the city engineer, and he has agreed to give me the map and letter Friday or Saturday of this week. I will forward them to you. I think you made a very good statement to the Rivers and Harbors Committee.

We have, in our business, received spruce lumber on our wharf by vessel and transferred it to cars for shipment to New Canaan. During the past two years, we have received several cargoes of cypress lumber from the South which have been sent us at Stamford by vessel, and we have transferred it to cars and it has been shipped further east. This was done to relieve the rail congestion at Harlem River. There is no doubt in my mind but that if the increased depth was furnished Stamford, there would be a great deal of bulk freight that would come to Stamford and be forwarded by rail from here to different points in New England. Of course, you will recall the fact that during the past summer there was some \$4,000 expended by the city and the property owners on the east branch of the harbor to deepen the water from the steamboat dock north.

We have recently been asked to quote prices on material for a grain elevator to be erected in Stamford. If grain could be delivered here by water, through the New York Barge Canal, to this elevator and then reshipped by rail from Stamford, it would do a great deal for the business of Stamford and also be a great relief to the congested railroad situation.

I think later on, after the war, we will be able, with this extra water depth, to have shipments direct from the Pacific coast through the Panama Canal to Stamford, and then transfer either to scows or cars for delivery outside of Stamford. Also, when the New York Barge Canal is in commission, we may be able to receive lumber in bulk shipped from the Great Lakes on larger boats than we can now, and reship from Stamford. If this increased depth of water in the East Branch could be assured during the next two or three years, I think it would go a long way to relieve the railroad freight situation, which is certainly most acute now, and the situation has been growing worse during the past two years. In fact, at the present time, we are unable to get anybody to quote us on stock to be delivered by rail unless we can furnish them with Government order numbers.

Yours very truly,

WM. H. Judd.

STAMFORD, CONN., January 25, 1918.

HON. SCHUYLER MERRITT,

Member House of Representatives, Washington, D. C.

DEAR Mr. MERRITT: Believing it to be a patriotic, as well as an official civic duty, I am writing you briefly concerning the immediate need of harbor improvement for what is known in Government circles as the East Branch of Stamford Harbor; locally as "The Canal."

As you are probably aware, this city has recently acquired by condemnation proceedings a frontage on the easterly side of the East Branch for sewage disposal and public dock purposes; said frontage on the canal, now owned by the city, being 1,210 feet, and the area of land directly in the rear being 25 acres.

Directly south of this tract of land is the manufactory of The Stamford Rubber Supply Co., and directly north is about 1,200 lineal feet of improved

dock property, which is being actively used for various mercantile purposes, including masons' supplies, road materials, coal, lumber, hay, feed, grain, and provisions, all practically dependent on water transportation.

Railroad facilities are limited to the northerly end of this side of the canal, but it is proposed and there is under consideration at the present time, plans for the construction of a railroad southerly to the Stamford Rubber Supply Co.'s manufactory; said railroad to pass through the dock property of the city of Stamford.

The belief is that the public dock as proposed would become a terminal of no small proportions and could be made a transfer point for freight to and from other points in New England. This can not be done with any degree of certainty or satisfaction unless our harbor from Long Island Sound up to the head of the canal is deepened to give access to boats and vessels of a reasonable draft.

The City, in conjunction with dock property owners, has, during the year 1917, expended \$4,000 in digging the canal deeper at its upper end. There is now supposed to be 9 feet of water in the canal at mean low tide, but there is not.

There are two market boats alternately plying between Stamford and New York throughout the year, but they are unable to make their dock at low water and must arrange their schedules with the tides.

It would seem that a channel deepened to 12 feet at low water and of a width of 100 feet, would be the least that a city of the size of Stamford should ask for; and that opposite the Stamford Yacht Club a suitable area should be provided for the safe mooring of vessels under any condition of tide and weather.

I am sending a sketch showing a good portion of the east branch of the harbor, and am designating thereon the principal manufactories and docks in the vicinity.

I trust you may have unqualified support in the advocacy of so needed an improvement as the betterment of Stamford's harbor.

Very truly yours,

PAUL NASH,
City Engineer.

9

TAUNTON RIVER AND POLLOCK RIP SHOALS, MASS.

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF TAUNTON RIVER AND POLLOCK RIP SHOALS, MASS.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRE, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 12, 1918



1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition

$$\alpha + \beta \geq 0 \quad (2)$$

is satisfied. If the condition (2) is not satisfied, then the system of equations (1) has no solution for arbitrary values of the parameters α and β .

2. In the second part of the paper the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition

$$\alpha + \beta \geq 0 \quad (3)$$

is satisfied. If the condition (3) is not satisfied, then the system of equations (1) has no solution for arbitrary values of the parameters α and β .

3. In the third part of the paper the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition

$$\alpha + \beta \geq 0 \quad (4)$$

is satisfied. If the condition (4) is not satisfied, then the system of equations (1) has no solution for arbitrary values of the parameters α and β .

4. In the fourth part of the paper the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition

TAUNTON RIVER AND POLLOCK RIP SHOALS, MASS.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
Saturday, January 12, 1918.

The committee this day met, Hon. John H. Small (chairman) presiding.

STATEMENT OF HON. WILLIAM S. GREENE, REPRESENTATIVE OF THE FIFTEENTH DISTRICT OF MASSACHUSETTS.

Mr. GREENE. Gentlemen, I appear before you on account of a report from the Board of Engineers and from the Chief Engineer to the Secretary of War in regard to a survey of Taunton River. I live on the Mount Hope Bay, which is the outlet of Taunton River, and I live at Fall River, Mass., 15 miles below the city of Taunton. I have been very much interested in all waterway improvements since I have been a Member of the House of Representatives and when I was elected mayor of Fall River in the year 1895, I delivered an address to the city council in which I said that while it is very important to improve all highways on the land, it is very much more important to improve every water highway, and the water highway of the city of Fall River never had an appropriation except one made nearly 40 years previously, of \$35,000. Fall River is where I live, and it is on Taunton River.

Mr. FREAR. The river has had \$210,000.

Mr. GREENE. Yes; that was the total amount.

After going into the necessity of the harbor improvement a public hearing was held at Fall River and the Member of Congress who preceded me attended, and there was a large attendance of citizens. Subsequently a hearing was had before the Rivers and Harbors Committee in this city, and I came here as mayor of Fall River and appeared before that committee in 1896, and as a result a survey was ordered, and following the survey the sum of \$175,000 was recommended for the improvement of the harbor of Fall River in Mount Hope Bay, at the outlet of Taunton River. I came here as a Member of the House of Representatives by reason of the death of my predecessor, the late John Simpkins, in 1898. The report came in to the House and the appropriation was made. And finally \$175,000 was expended to make that improvement. I also had another proposition made for an anchorage area in the harbor, which the Engineer Board thought we ought not to have that improvement. Subsequently I appeared before the Engineer Board for Rivers and Harbors and upon reconsideration they decided to recommend an expenditure of one-half of the estimated cost amounting to \$135,000 for an anchorage area. A

proposition was advocated for a canal along the Atlantic coast, from Boston to Beaufort, N. C. I was a strong advocate of that canal. I did not represent the city of Taunton at that time. The Member who then represented Taunton didn't believe in the project.

I favored a canal commencing at Taunton, but providing for an improvement with a canal of the depth of 25 feet (you will find it referred to in this report) up the Taunton River and through to Boston. The mistake made then was that the projectors favored too expensive a proposition. A depth of 12 feet might have been approved. If that had been approved, you would all have been blessing me thereafter. But the projectors insisted upon a depth of 25 feet, and the Board of Engineers—properly, I guess—decided it was too extravagant, and they wouldn't recommend the great outlay. And the State of Massachusetts had Eugene N. Foss for governor; and while he talked loudly for waterway improvements, he opposed this canal, and the reason he opposed the canal was because the people of Boston didn't open their eyes enough to see the advantage of the improvement, and it fell by the wayside. But that report is in existence, and the United States engineers made a first-class report, only saying it would cost a large sum of money and they questioned the advisability of it. Now, relative to Taunton River, and I now represent the city of Taunton, and I asked for a survey of that river providing for 25 feet of water from where there is now 25 feet of water at Somerset—asking for 25 feet depth the rest of the way up to Taunton, which is one of the oldest towns in Massachusetts, a distance of about 9 miles. Taunton was settled shortly after the Pilgrims landed at Plymouth. I asked for that depth in the original bill. Finally it was suggested that 18 feet might be found advisable. I agreed to 18 feet, and finally the Board of Engineers in their wisdom concluded to recommend a barge canal and make it 12 feet deep. Of course there is 5 feet difference between high water and low water that would make high-water depth about 17 feet.

Then the Board of Engineers, after making an estimate of the cost at \$534,500, put in a condition there that, while they believed that it was a good improvement, still either the State or the city of Taunton, which, like all cities, hasn't money to spare—or if anybody along the line of the river—must put up money enough to pay the remaining half of the expense. That may be good judgment, but I don't believe in it. Unless you are going to make a rule, that shall be effective in all improvements hereafter, that in the future in every river improvement and harbor improvement the local interests or State must put up one-half the cost, then it is not right to make the city of Taunton pay one-half of this cost. It isn't right. It isn't proper, and I protest against it, and I ask that this matter be fully considered by your committee.

Mr. SWITZER. What is the population of Taunton?

Mr. GREENE. It has about 35,000. It has a large number of industries. It is an old city. It was originally the largest city in the county, but the other cities—Fall River and New Bedford—had the advantage of river and harbor improvements, and beat them out, and they were denied the right; and yet at one time they owned the largest amount of tonnage of any other city in the State except Boston. Some of this tonnage was built on Taunton River. Now,

to-day they ought to have this improvement. I don't believe it is right to make them pay this half of the expense.

The Legislature of Massachusetts has appropriated, as a permanent appropriation, \$100,000 toward the expense of this improvement. It is available at any time when the Government makes this improvement. Possibly the legislature may do something more; I don't know. But it is unjust to make them pay half of this expense unless you are going to make that a positive rule to be applied to every living man and every living community that tries to get an improvement. The improvements in New Bedford Harbor will cost \$900,000, and neither the city or State has contributed or been asked to contribute a single dollar. Fall River has had \$345,000 expended, and has not been asked to contribute anything.

Mr. DENTON. This is simply a voluntary appropriation on the part of the State?

Mr. GREENE. Yes, sir.

Mr. DENTON. Could that be used as a credit on the \$265,000?

Mr. GREENE. Yes, sir.

Mr. DENTON. It is in lieu of that, isn't it?

Mr. GREENE. Yes, sir. It can be used anytime when the Government agrees to improve the river.

The CHAIRMAN. Mr. Greene wishes the committee to refer this matter to the Board of Engineers to see if they can not upon supplementary evidence recommend a reduction in the local appropriation.

Mr. GREENE. That is right. I think the people are entitled to consideration. I don't think they ought to be put down to this hard rule, unless it is going to be the rule hereafter. I find these boards change their minds sometimes. And as they sometimes change their minds, I want them to take this proposition and look it over again. I know Gen. Abbott, who wrote this report. He is a fine man, and he talked first rate, and he looked all right, and when he got back to make the report he got back to the hard and fast way of putting down the military consideration——

The CHAIRMAN. You never did give the number of this report.

Mr. GREENE. Document No. 110, Sixty-first Congress.

I would like to have you gentlemen, if you will, to refer this back to the Board of Engineers, and I would like to have them review this matter. I would like to have it go back to the board and ask them to take this up for reconsideration and see if they can't make a little more liberal recommendation, see if they can't forget that they are Army engineers and see that they are men, and look at the thing in a business way and not in the narrow military sense. Take it up as business men, take it up the same as I take up everything I have on a business line, and take it up and look at it in the broad sense and not in a narrow view.

Mr. FREAR. What do they mean here in the report by saying "local benefits would be felt and should contribute liberally toward the improvement"? What do they mean by that?

Mr. GREENE. The smaller towns used to do a good deal of ship-building up there on Taunton River before any improvements were made. They mean that probably these towns would make improvements. Last year we launched one schooner opposite Fall River, and we have another on the stocks now, and there is a large shipyard

being located 11 miles below Fall River. We are going back to the original idea of building ships. But there used to be some shipbuilding done further up the river, at Somerset, where the water is 25 feet deep, and there used to be quite a little shipbuilding there, and possibly they think this improvement would help these towns. But these towns are poor towns and they haven't any money to spend in improvements of this kind, and the record of the United States thus far in making improvements on rivers is without calling on the people to pay half the cost. And I ask you when we come asking this improvement and the legislature has appropriated \$100,000 in order to help out the city of Taunton, you to be liberal and give us a chance to make this improvement. I want this proposition to go back to the Board of Engineers and ask them to give it more consideration. They gave us a good hearing. They were liberal in their hearings, but I don't think they ought to take this narrow view of the project.

Mr. FREAR. Is there any additional information to be presented to the Board of Engineers?

Mr. GREENE. I learn something every day, and I think we may present additional facts if a hearing can be had.

Mr. FREAR. I mean have you any in mind now in addition to what you placed before them heretofore?

Mr. GREENE. No; except the matter of justice. I am not a lawyer, but I am like a lawyer that has got a case. He is prepared to outline his purpose, and ought to be, and I am not prepared to outline this in a legal sense, but I came here to ask the Board of Engineers to take a more liberal view of this proposition.

The CHAIRMAN. The committee will take it up Mr. Greene, very soon.

Mr. GREENE. Yes, sir. There is one other item I would like to take up.

The CHAIRMAN. What is the nature of it?

Mr. GREENE. That is Pollock Rip Channel, in Nantucket Sound. It is a very valuable improvement for which I fought against the Army engineers and everybody else, because they had reported against it time and time again, till finally they granted a public hearing in Newport, R. I., and they had all the interests of the whole coast, clear from Maine to Florida and beyond; they came up there and there wasn't a living soul there but what said it ought to be done, and they convinced the Army engineer in my district, Col. Willard, who is now in the district, being put in there since the war broke out as an engineer, retired, and he is very strong for that improvement now. And he is right. It is one of the worst places on the coast, and it was thought that it wouldn't do any good to make the improvement and it wouldn't be permanent after it was made; but I had all the maritime men that had traveled up and down that coast since before these Army engineers were born and knew all about it, knew there had been a great many lives lost, a great deal of property lost there, and finally they were convinced that the improvement should be made, and finally they recommended an appropriation of \$250,000 to start the proposition, and they were willing to put \$250,000 in order to start it. The work done there proved good, but the Senate cut the appropriation down to \$125,000. and

that was added to three times, so we got \$375,000 in there finally, and then the troubles of war came on and they couldn't make this a war measure and then they stopped recommending anything to be done to it, and yet, notwithstanding that work had been abandoned, the work already done stands; as I understand by the report of the engineers, it proved to be a wise expenditure as ever was made. Therefore, I think that it ought not to be abandoned after the Government has already expended \$375,000, in the interest of the whole coast, and it ought to be taken up.

And right in direct connection with that I want to refer to the fact that one of the stumblingblocks that may stand in its way now is that a proposition has gone to the Government suggesting the buying of the Cape Cod Canal. I want to say to you, gentlemen, that the Cape Cod Canal ought never to have been built. It is owned by a private corporation, and it was understood when it was built that the Legislature of Massachusetts should give them \$200,000 when they had expended a certain sum, which they did. It would be the greatest extravagance for the Government to buy that canal, and I have never seen an Army engineer that would recommend it. I don't know that there is anyone but Gen. John E. Johnston, commander of the Department of the East, who sailed through the canal and thinks the Government ought to buy it as a military necessity. He is a good Army man, but I do not understand that he is an Army engineer.

Mr. BOOHER. Didn't Admiral Benson, before the Senate Rivers and Harbors Committee last year, indorse this project?

Mr. GREENE. Possibly he did. Admiral Benson is a good man and he is interested in what is good for the Navy, and possibly he thought they could send some of the light craft through there.

Mr. BOOHER. What is the depth of that canal?

Mr. GREENE. Twenty-five feet. A party went through there when the canal was opened. I was one of the party and the current was so strong they couldn't stop up there anywhere, so they had to go clear up the canal and turn around at the northeastern end of the canal before they could land the passengers. It should never have been built. It was built by the Belmonts, of New York. They sold their bonds to build it and the widows and orphans of the country own many of the bonds.

Mr. FREAR. About what was the cost of that, do you know?

Mr. GREENE. I don't know. Whatever the cost, the money has been wasted. It was built with the purpose of hoisting it on the Government. The State of Massachusetts has considered the case for a long time, and these private individuals experimented with it; and it isn't a very good proposition, and they want the Government to take it up. You had better spend your money on the Taunton River. It would be a better place in case of war, and it would be more valuable to Boston than any other canal proposition.

Mr. FREAR. Getting back to Pollock Rip, you have a 25-foot depth?

Mr. GREENE. Yes, sir. That proposition was to have a direct canal a mile wide and 7 miles long and 30 feet deep.

Mr. FREAR. Twenty-five feet, isn't it?

Mr. GREENE. I asked for 30 feet.

Mr. FREAR. And 600 feet wide?

Mr. GREENE. No; I asked for a mile—7 miles long—and that is what was originally proposed. If they have got in a narrower view there they want to broaden their view.

Mr. FREAR. Is there any channel in the country, Mr. Greene, a mile wide?

Mr. GREENE. No; but there ought to be there now; and I have no interest here politically. It isn't in the district I represent. I am interested in navigation. I have no interest at all in it politically. It wouldn't make a particle of difference politically or personally to me if it was abandoned.

Mr. FREAR. What is your reason for making it a mile wide?

Mr. GREENE. To make it large enough to take in the commerce that goes through there.

Mr. FREAR. I know, but the commerce that goes in New York City isn't a mile——

Mr. GREENE. I know, but while you are building it there why not make it large enough to meet what is required?

Mr. FREAR. What would it cost?

Mr. GREENE. About a million dollars.

Mr. KENNEDY. In the report here it says it ought to be——

Mr. GREENE. Well, let me tell you, this is the way the channel went before: In like that, off like that, and out like that [indicating]. And there have been more vessels wrecked in going around those bends through that canal. That was probably laid out by the Indians in the early history of the country. But now we ought to have something decent, and every engineer knows the improvement ought to be made, and this committee had the good sense to authorize that the work commence after they read the report from the engineers, and after we had that hearing. And now I don't want you to weaken. The matter will be worth more than the Cape Cod Canal, and you will pay more than a million dollars for the Cape Cod Canal.

The CHAIRMAN. The Chief of Engineers did not make any recommendation for continuing this work at this time?

Mr. GREENE. No; on account of war conditions.

The CHAIRMAN. And Mr. Greene is asking us to consider whether or not an appropriation ought not to be made in this bill.

Mr. GREENE. I think it ought to be as a matter of economy to save the money you have already expended there, to go ahead and make this improvement. Not that I ask you to make it all at once, but make it—make it under the direction of Army engineers.

Mr. FREAR. It is completed to 25 feet, and it's actual width is 600 feet?

Mr. GREENE. I know Col. Black very well, and most of these Army engineers; several of them I have met. I want them to be broad and liberal in consideration of these two projects that I have brought to your attention.

The CHAIRMAN. Mr. Greene, the committee are very glad to have heard you, and both matters shall be considered.

Mr. GREENE. I thank you. I am very much obliged to you for your kindness and attention.

(See statement of Col. H. C. Newcomer, assistant to the Chief of Engineers, in hearings on river and harbor bill, Sixty-fifth Congress, second session.)

TENANTS HARBOR AND WILLS STRAIT, CASCO BAY, ME.

HEARINGS

ON THE SUBJECT OF

THE IMPROVEMENT OF TENANTS HARBOR AND WILLS STRAIT, CASCO BAY, ME.

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.
CLARENCE F. LEA, California.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

FEBRUARY 5, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

There was not attached to that plan any restriction like that which the committee has placed upon the local interests in this case. A large proportion of that money has been expended to provide for a depth of 6 feet from Paducah to Chattanooga, and beyond to Knoxville 8 feet, for that river. This river will be mighty nearly completed when these locks and dams at Muscle Shoals are complete. So this is the question we are dealing with, namely, the question of whether you will spend \$20,000 or \$22,000 to complete this work. This river has not been treated exactly right. As I said it is the greatest river in the United States, except three or four. The Chief of Engineers now advises that, so far as the physical size of the river is concerned, the Tennessee River empties into the Ohio at Paducah 60,000 gallons per minute more than the Ohio has after its tributary, the Cumberland, has reached it. It is important in commerce. Anyone who knows the resources of the six or seven commonwealths which lie on the banks of this river must know that when opened up to navigation it will afford the best means of commerce in this country. It will have more commerce to carry than there is anywhere else to carry. Of course, it can not be carried and made valuable until it is opened up to navigation.

Some years ago I sought at the hands of your committee an appropriation to open up the mountain section of this river some 40 or 50 miles below Chattanooga, where the channel was obstructed by rocks and boulders against which the boat would be destroyed. We did secure a wharf, but no appropriation. Afterwards an act was passed by Congress requiring or permitting the communities to provide private capital for making these improvements and obtaining the electrical power as the result of the overflow of water. Our estimates were that the improvement could be made for about \$1,800,000. The improvement was finally made, and forty odd miles of that river was made a lake—which was before a shoal—opened up to navigation, at an expense of \$11,500,000 to the people of the State of Tennessee and of the State of New York, or wherever the stockholders came from who supported it. They carried it through, knowing that it took \$11,500,000. That much money in the cost of navigation for commerce has been saved by a private enterprise, and the Government to-day has power over that lake and dam such as it has over no other in the United States.

The CHAIRMAN. Do you recollect the power developed there?

Mr. MOON. About 65,000 horsepower.

Mr. DEMPSEY. That is at Hales Bar?

Mr. MOON. Yes. The Government could, tomorrow, if it sees fit, take over not only the lock and dam, but the auxiliary plant, either on the basis of its original cost or upon its assessed value. The Government has the privilege of having an inspector there, it has an inspector there whenever it desires, and it did have an inspector there to inspect the work when it was done. All that work has been performed without any expense to the Government. The people who have been engaged in private enterprise on the Tennessee River have done more for the improvement of that great river, one of the greatest rivers in the United States, than has the Government of the United States. It makes me ashamed to think that anybody would for one minute question whether \$20,000 or \$22,000 more should be paid by the Government for the improvement of this river.

The CHAIRMAN. One of the difficulties which confronts our committee from time to time is the question of local cooperation. There are two factors which enter into it. One is the question of whether there should be local cooperation, and another is, assuming that it appears that local contributions should be made, whether there is any State or subdivision of the State which, as a practical proposition, can make the contribution.

Mr. MOON. That is for a particular project.

The CHAIRMAN. Any project. What, in your mind, are the difficulties here, assuming that there should be local cooperation on merit—what are the difficulties in actually making a local contribution?

Mr. MOON. The difficulty must necessarily arise in going to a private citizen and asking him to spend his money for the public benefit and use in a project out of which he personally can not obtain any benefit. You must take public men with big purses if you would have them make contributions to anything like that. In my judgment, it is radically wrong for the Government to talk about private enterprises to develop rivers that are worth developing. If he river is not fit for development for the purposes of commerce by the Government of the United States, then it is your duty to abandon it. If it is fit for development, then it is your duty to improve it without imposing this burden upon the people of the local communities. So far as the Tennessee or any other river is concerned, if there must be contributions, they should not of necessity come from the immediate neighborhood in which the improvement is to be made. The contributions, on the other hand, should come from the whole body of people who are affected. If that is so, the question arises as to how far you should go. Here is the third river in the United States. If you abandon it you must abandon everything else of less importance. Here a contribution is asked for to improve this mighty river. The Government has already put \$11,200,000 into it, and there has been a private contribution, for the purpose of making navigation safe for a great portion of the river of \$11,150,000. I do not think this committee should hesitate about this question for a moment.

Mr. FREAR. If the Government has already put in about \$12,000,000—it is eleven million nine hundred and some odd thousand—and private parties have put in \$11,500,000, making a total of about \$23,000,000, what is the reason that commerce has been steadily decreasing on the Tennessee River?

Mr. MOON. I suppose that commerce was bound to decrease. The conditions obtaining have bottled it up in the middle where you can not get it through either way.

Mr. FREAR. The decrease has been 60 per cent in 10 years.

Mr. MOON. Commerce, in my judgment, can never exist in that river under present conditions. It will not be steady. It may fluctuate. But there never can be a fixed, stable, and valuable commerce that will be beneficial to all the people until the river is fully opened up to navigation.

Mr. FREAR. We have put in nearly \$100,000,000 in the lower Mississippi.

Mr. MOON. Maybe you never should have fixed the Mississippi. You must determine first whether a river is fit. If it is not fit, then you should abandon it. Effect on railroad rates should be taken into consideration.

Mr. FREAR. What do I understand you to say about railroads?

Mr. MOON. They are carrying through freight from St. Louis to Chattanooga. Their boats are owned by the merchants, and wherever the river gets so low that you must pass the shoals and the obstruction, particularly in that canal down there at Muscle Shoals, that can not be done. My information as to the merchants is that their rates are practically double under those conditions.

Mr. FREAR. How can you do that under the interstate commerce law?

Mr. MOON. My friend is too old a Congressman to ask how anything of that kind can be done. It is done every day.

Mr. FREAR. The law is against it, isn't it?

Mr. MOON. That may be.

Mr. KENNEDY. I know that is the law, because we had the same condition in our country.

The CHAIRMAN. Judge Moon, have you anything further to say?

Mr. MOON. No.

The CHAIRMAN. Then we will hear from Mr. Austin.

**STATEMENT OF HON. RICHARD W. AUSTIN, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF TENNESSEE.**

Mr. AUSTIN. Mr. Chairman and gentlemen of the committee, in passing I want to say that our good friend from the eighth Alabama district said that I was unfortunate in representing a district on the upper Tennessee River. I want to say that I tried to represent the gentleman's district in the State of Alabama, and, as a result of it, I moved up the river, and I am here now; and if I change my location I would soon be retired from Congress.

The CHAIRMAN. You went up higher?

Mr. AUSTIN. I went up higher.

Just a word about this assessment against the local property owners. What will be the attitude of the Tennessee delegation in supporting a proposition of this kind, when the Ohio River secured \$60,000,000 for locks and dams without levying a cent against the local property owners along that river? Why should there be discrimination, and why make this new departure after rivers of certain sections of the country have been improved—the Monongahela, the Allegheny, and many other rivers—without assessment upon the property holders? Now, Mr. Chairman, if you are going to adopt that rule and stand by it, I am not going to waste any time coming before this committee. So far as that matter is concerned, the question is settled; we are not going to raise a dollar. You must treat us just the same as you treat the people along the Ohio and other rivers which have been opened to navigation in the United States without making an assessment against the local people. If you had inaugurated this policy in the beginning, we could see the fairness and justice in it.

Here is a recommendation to abandon a proposition adopted by Congress, in the Sixty-second Congress, set out in what is known as

Executive Document No. 360, a report of Maj. (now Gen.) W. W. Harts in regard to the improvement of the Tennessee River and its tributaries, which was threshed out before this committee and both houses of Congress. Here is a recommendation by the local or division engineer to abandon a scheme to make this river a practical stream for transportation purposes.

Mr. FREAR. From where to where?

Mr. AUSTIN. Chattanooga to Knoxville, 181 miles, where the commerce last year amounted to over \$2,000,000; where the value of the commerce in one year exceeded the total amount expended from the very beginning of work on this part or section of the river.

I want to enter my protest against the abandonment of the program already adopted and for which Congress has already appropriated money. We have the richest agricultural lands along that river that can be found in the United States, and an impartial jury, a Federal jury, has assessed a value, a fair valuation, upon the property to be damaged, and now, gentlemen, I ask you, is it to be abandoned and the money used for some other purpose and the recommendation that we no longer make appropriations for this river by sections be changed, and a lump sum appropriation made, so that all of the money may be expended on some other section of this river? What is the section of this river the division engineer wishes to abandon the locks and dams upon? It is where the great hardwood timber resources of the United States are located; where zinc is being mined, with the employment of several thousands of men; where 4,000 men are engaged in the aluminum industry and between four and five thousand employed in digging coal; and where the best American marble is being produced in abundance. The proposition is to stop and go backward instead of forward, by the local Engineering Department of the Government. It is asking this committee and the American Congress to go backward and not forward. Against such an unwise policy I enter my protest.

If you gentlemen will not build these dams, then in all fairness, give us legislation which will enable us to do it by private capital. We ask and demand one or the other. I have had a bill before this committee for eight years asking for the privilege of a private company of placing locks and dams on the Clinch River, as recommended by the late Gen. Kingman, to build these dams under the supervision of the Government, but to cost the Government nothing, and give the people navigation, at an expense of \$2,500,000 for light and power—for electricity. Nothing has been done with it. Not a dollar has been appropriated in eight years for the practical improvement of that river. What would it do? It would open up one of the richest coal fields in the country. The other day the conditions obtaining in my city were such that they required immediate action by the fuel department to prevent the gas company from closing down its plant and leaving that city of 100,000 people in darkness; and yet, gentlemen, we are within 30 miles of the coal fields upon this river. There is some talk about having a small rivers and harbors bill. This whole country is tied up to-day by congested transportation on railroads. There never has been a better time or a stronger argument for a great rivers and harbors bill, which would meet the approval of every enlightened and thinking man in America. Let us

dig out the rivers of this country which are subject to practical navigation all the year, and which will open up the inexhaustible resources of the country, and let us defy the mudthrowers, the critics, and the knockers. Beneath this work is involved the industrial and military development of this country, and this is no time to halt, to be turned aside or stopped in the development and perfection and the onward movement of real, genuine river improvement.

We are paying over \$4 per ton for transporting pig iron to interior cities located on rivers, because we are locked up. We are paying like transportation charges on lumber, marble, zinc, aluminum, and our manufactured articles.

Mr. TAYLOR. How many marble developments have you?

Mr. AUSTIN. They are so numerous that I don't know. There are 25 quarries in my country alone—the best marble in the world.

I protest against this assessment and against the abandonment and the decision to make the third and fourth largest river in America useful to the people. We have been coming here for half a century in the interest of this great river which, when you improve it once will stay improved, because it is not sandy, has no shifting banks or bottom. It is not enough that we go every year and get out gravel and boulders or remove overhanging trees. That kind of work has been going on for half a century, and it is still going on; but that is not sufficient. We must do the job as recommended by Gen. Harts. Gentlemen, don't hesitate to carry out what you know is for the best interests of the American people because the war is on. The greatest river improvement in France was pushed to completion last year. The reason Germany is so powerful in the matter of moving its army is that it had the wisdom and foresight to improve its rivers.

The CHAIRMAN. What is the specific suggestion you make to the committee now, Mr. Austin?

Mr. AUSTIN. The first is, Mr. Chairman, to abandon this passing the hat around to local communities to help this great Government. The next is not to adopt this proposition to abandon slack water navigation above Chattanooga. Suppose you improve it below and cannot reach the great resources, I have mentioned. You have cut off and destroyed the main channel of this river. We are arguing for a way to get at those great resources and to create and develop commerce and trade. Now, we have been speaking of electricity. Every particle that has been developed in East Tennessee is in use today, and they have been compelled to use additional power from other fuel plants. They are building in my district a water power proposition which will develop 200,000 horsepower, the first dam now being constructed 200 feet high and will be completed in a few months.

The CHAIRMAN. What is that?

Mr. AUSTIN. It is thirty-five miles from Knoxville on the Little Tennessee River. They are going to use every particle of power which will be developed there. I asked the Company, in connection with the proposition of locating an armor plate plant in Knoxville, if they could supply the necessary electricity; and they said no, that they could not possibly do it, that they needed ever bit of it.

Mr. KENNEDY. They told me they could not use an electric plant in that connection.

Mr. AUSTIN. That may be; but I simply know that I made a proposition to these people, in connection with the armor plate plant, and they stated they would use it all. That company—the Aluminum Co. of America—is using all the extra power it could obtain from Hales Bar, below Chattanooga and all that could be obtained from the Ocoee Co.

Mr. TAYLOR. How much does that develop?

Mr. AUSTIN. About 200,000. On the Little Tennessee River. If you will pass a bill permitting a private company to build this dam which the local engineer wants to abandon the upper Tennessee River and the other dams recommended by Gen. Harts in his report, and also the Clinch River, I won't ask a cent from the National Government, and I will put this locality, locked up on water transportation, in touch with the outside world, and open up the coal mines, the aluminum industry, the hardwood lumber, zinc, and the pig iron with the South, North, and Middle West.

The CHAIRMAN. It is the purpose of legislation that is now pending to create a condition under which private capital will be able to take up the development of these water-power propositions.

Br. BOOHER. The shortage of coal, you mention, in Knoxville, was due, was it, to inadequate railroad facilities?

Mr. AUSTIN. Every winter this happens. The mine operators say they have the coal supply but are unable to get the necessary cars to move it. Then we go to the railroad people, and they say that they are furnishing all the empty cars they have. There has been a lack of rolling stock on the part of the railroad company for over 30 years. Every winter we have this serious congestion and the lack of a sufficient number of coal cars. I have had to go to the fuel administration office a number of times to prevent manufacturing plants from closing down in my district. One man wired me that unless he had fuel within 24 hours he would have to close down. What is the trouble? As I have said before, the mine operators say they have the coal supply, but can not get the cars to move it; and the railroad company states it is furnishing all the empty cars they have.

The CHAIRMAN. You are familiar with commerce on the upper Tennessee above Chattanooga. That commerce for 1916 was quite substantial—345,604 tons, at a valuation of \$12,225,000. What is the prospect of increasing the commerce on the upper stretch of the river?

Mr. AUSTIN. None, unless you improve the river by locks and dams. There is a falling off this year—last year—as compared with the year before. Some of our companies which have had to have sand and gravel for concrete and other work now obtain their supply from about 12 miles above Knoxville on the railroads. In some seasons of the year there is a long dry period, and it blocks navigation, and, of course, there is a falling off of commerce; if you had a railroad company that ran its trains only six months in the year, people would have to use auto-trucks or wagons to carry their produce, and there would be a falling off of railroad business. As a business proposition, I ask you, gentlemen, can you produce and increase commerce without first improving the river, the transportation facilities? The

resources are there. Mr. Smith, of the Geological Survey, reports what we have in mineral wealth.

The CHAIRMAN. What are the names of the larger towns along the Tennessee River?

Mr. AUSTIN. Knoxville, next to Birmingham, Ala., as an industrial city; Rockwood; Harriman has many manufacturing plants and is on the Emory, a branch of the river which would be improved by a dam above Kingston on the Tennessee River so that we would have slack water navigation; London and Lenoir City.

The CHAIRMAN. What kind of water terminal facilities have you at Knoxville?

Mr. AUSTIN. We have a public wharf there and a private wharf. We can land all the boats that will ever get there. It is a question of getting the boats there, and this depends upon improving the Tennessee River.

The CHAIRMAN. My information is to the effect that Knoxville does not have a terminal properly equipped.

Mr. AUSTIN. They have nothing like New York or St. Louis, of course. Why should they have one unless Congress is going to give them a river? Why build a depot without railroad tracks being laid?

The CHAIRMAN. You can not develop further traffic without terminals.

Mr. AUSTIN. You can not develop tonnage without slack water navigation. We are mining zinc; we are mining marble; we are mining coal; we are treating Arkansas aluminum ore; we have cotton mills and knitting mills; we have woolen mills; we have furniture and marble factories; we have practically everything—except an improved river.

The CHAIRMAN. You are stressing the importance of improving the Tennessee River and it is a great stretch of river. What I was trying to direct your attention to, however, was some method by which we might increase the commerce pending the improvement so that those towns along that river might be ready to utilize the river when it is completed.

Mr. AUSTIN. Take the city of Harriman, which is a promising and successful town. They have been waiting 15 years, since Maj. Kingman made a report on the proposition which would give them slack water navigation. Suppose they had built their terminal wharves when he made his report. They would have rotted down. I could put in the insane asylum any man who would follow such a procedure as that. You make the appropriation here; we will make the appropriation there the next day, for terminal facilities.

Mr. ALMON. Just in that connection, Mr. Chairman, I will say that we have good water navigation on the Tennessee River up as far as Sheffield, and since that has been going on, Sheffield has taken an active interest in improving the terminal, and has issued bonds for that purpose, and in connection with the improvement of the Tennessee River, incident to the opening of the river to navigation up to that point; and I believe the same thing would occur along up the river as soon as they are assured that they are to have real navigation. They would do their part so far as taking care of the commerce at landings is concerned, in accordance with the suggestion that has been going on between this committee and the War Department and

the President, with which our people along the Tennessee River have familiarized themselves and heartily approve.

Mr. KENNEDY. May I be heard for a moment?

The CHAIRMAN. Yes.

Mr. KENNEDY. In this bill we are carrying a larger sum than has been carried for any river excepting the Ohio River and the Mississippi. I want to refer also to page 2812. It shows on that page that, deducting the sand, which was only hauled a few miles, there was a reduction to 153,000 tons, and it only averages an 11-mile haul; and the marble of which the gentleman spoke has been hauled just 10 miles, according to this statement.

I am not satisfied with the conduct of anyone who comes before this committee and makes a proposition based upon what his delegation will do, what stand they will take, and asks for a decision upon any such basis. If that be the attitude of the gentleman, I am not satisfied with it. He has just presented his case in what seems to be that tone.

The CHAIRMAN. I think you misunderstood him.

Mr. AUSTIN. The point I made is this, whether we are going to have one rule for the Ohio River and a different rule for the Tennessee River.

Mr. KENNEDY. If this committee is to determine this question, it has the right to take into consideration all the facts in connection with the improvement. One of the questions is this: Has navigation increased upon that river, has commerce increased upon that river, which has been improved by the Government since 1852? There has never been a terminal put there in all this time, in all this half century that we have been improving the river. We have spent on the entire river something like \$12,000,000. The Government is trying to do what is right, and I do not think the committee is entitled to have the matter presented to it in that way.

Mr. AUSTIN. Suppose you determine you will not go into a community which will not put up money. Suppose other communities in the United States were to do it. Suppose they put it up on a stream which has no merit, a stream that should not be improved. Are you going to appropriate money out of the Treasury of the United States to develop a stream that is not fit for development? If you establish this rule, the rich communities will be here, and you will be legislating for them alone. You are supposed to legislate for all alike.

Mr. OSBORNE. It looks to me like the amount involved is so small—

Mr. AUSTIN. It is \$22,000.

Mr. OSBORNE. Yes. It is so very small that it is hardly worth consideration. I think it ought to be waived. In my own district, the Government, in the last rivers and harbors bill, provided an item for taking care of the silt in the harbor, the amount being \$1,800,000; but the condition involved was that the local community should put up an equal amount and furnish the rights of way. We had three or four times as much business in our harbor, in value, as the entire Tennessee River has.

Mr. AUSTIN. You have no navigable streams.

Mr. DUPRÉ. Isn't it true that in southern California, and in many States where the streams dry up, a large part of the time, and where you have not very many navigable streams, the local communities in general will unite in a willingness to do so and so?

Mr. OSBORNE. Yes.

Mr. SWITZER. I think it is a fact that in perhaps nine cases out of ten that is an important factor in the recommendation, and but for that condition of affairs the opposite course would be recommended.

Mr. OSBORNE. No doubt. In our case the local community has to pay the same amount; the appropriation was made upon condition that that would be done. I do not want to discriminate against this community. The amount is too small to argue about; it is not worth considering.

Mr. DEMPSEY. The amount is very small.

Mr. OSBORNE. It seems to me it is a question of which comes first in this river business—river transportation. It does stand to reason that you are not going to have any commerce unless you have a river to carry it on, and the argument that the rivers have no commerce does not seem to me to have as much strength as it would if it were put the other way around. That argument would lead to an abandonment of the rivers as avenues of commerce.

Mr. FREAR. If you will pardon me, I don't think there was any argument of that kind.

Mr. OSBORNE. Not in express terms, but it was argued that if there is no commerce the Government should cease to keep its rivers open.

Mr. FREAR. I have not heard that kind of argument.

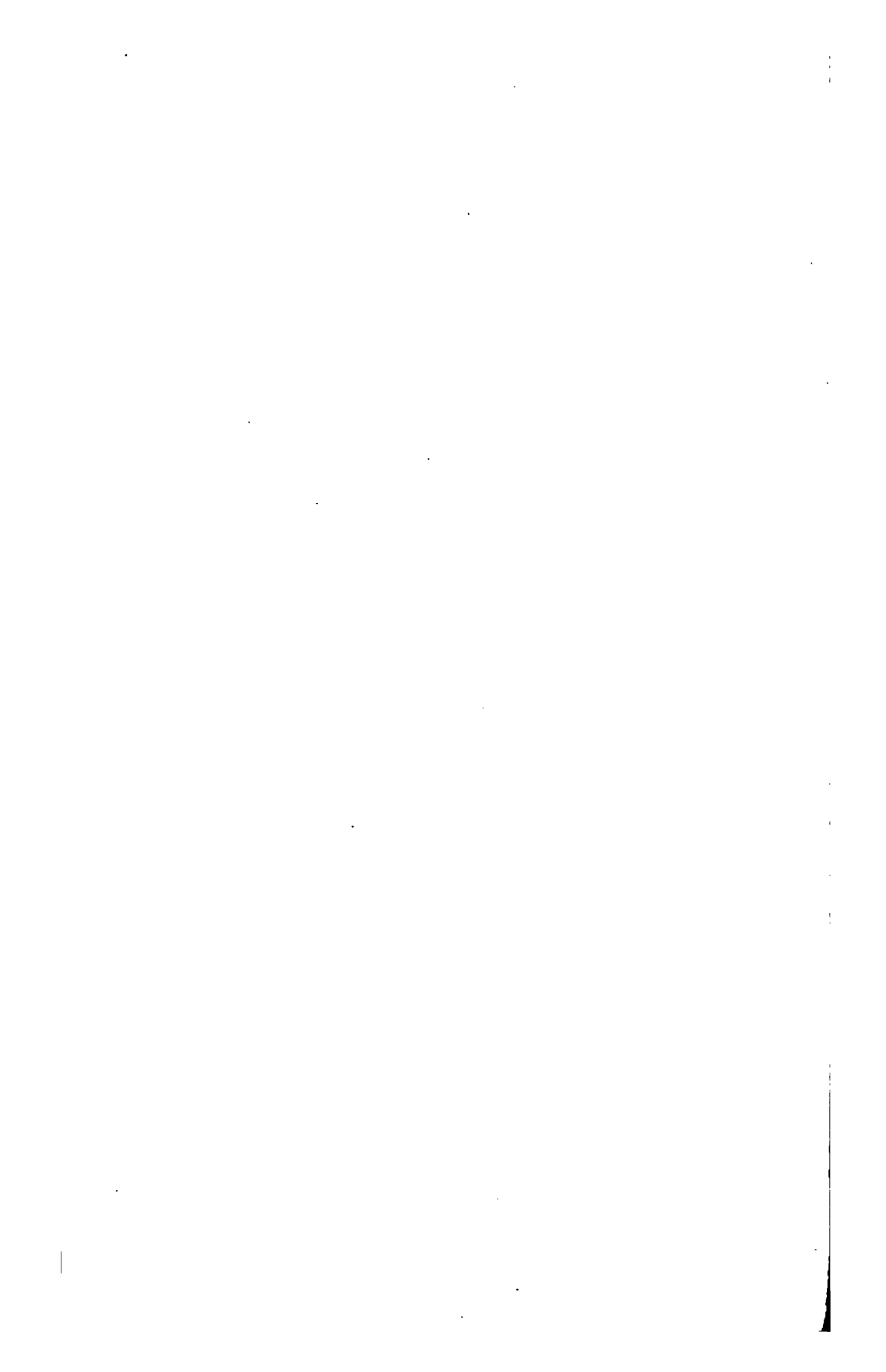
Mr. DUPRÉ. Do they recommend the abandonment of the river on account of no navigation there?

Mr. FREAR. No; I don't think so.

Mr. OSBORNE. I have spoken in entire good faith. My remarks were not addressed to this particular project so much as to the general subject. As I understood the argument it would result in the practical abandonment of many of these rivers, and it seems to me that that is not the correct theory; that the avenues of commerce should be kept open even though they might not show a very large commerce. Commerce has a tendency to be kept down by the lack of transportation facilities. I think that good policy lies in favor of keeping the rivers open, not extravagantly, but as efficiently as possible.

Mr. FREAR. The Captain has put up a straw man, because no one has proposed that, because we all stand on the proposition as laid down by Col. Townsend, that we make a test on some of the rivers and that all the rivers be maintained, as said, in status quo. Wasn't that the recommendation? But the objection in some of these places is where a large appropriation is asked for for power purposes, as on the Tennessee River.

The CHAIRMAN. If there is no further discussion on this subject we will hear from Col. Newcomer.



✓

VERMILION RIVER, LA., AND CHANNEL TO CONNECT WITH INLAND WATERWAY

HEARINGS

ON THE SUBJECT
OF THE

IMPROVEMENT OF VERMILION RIVER, LA., AND CHANNEL TO CONNECT WITH INLAND WATERWAY

HELD BEFORE THE

COMMITTEE ON RIVERS AND HARBORS

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

CONSISTING OF

JOHN H. SMALL, North Carolina, *Chairman*.

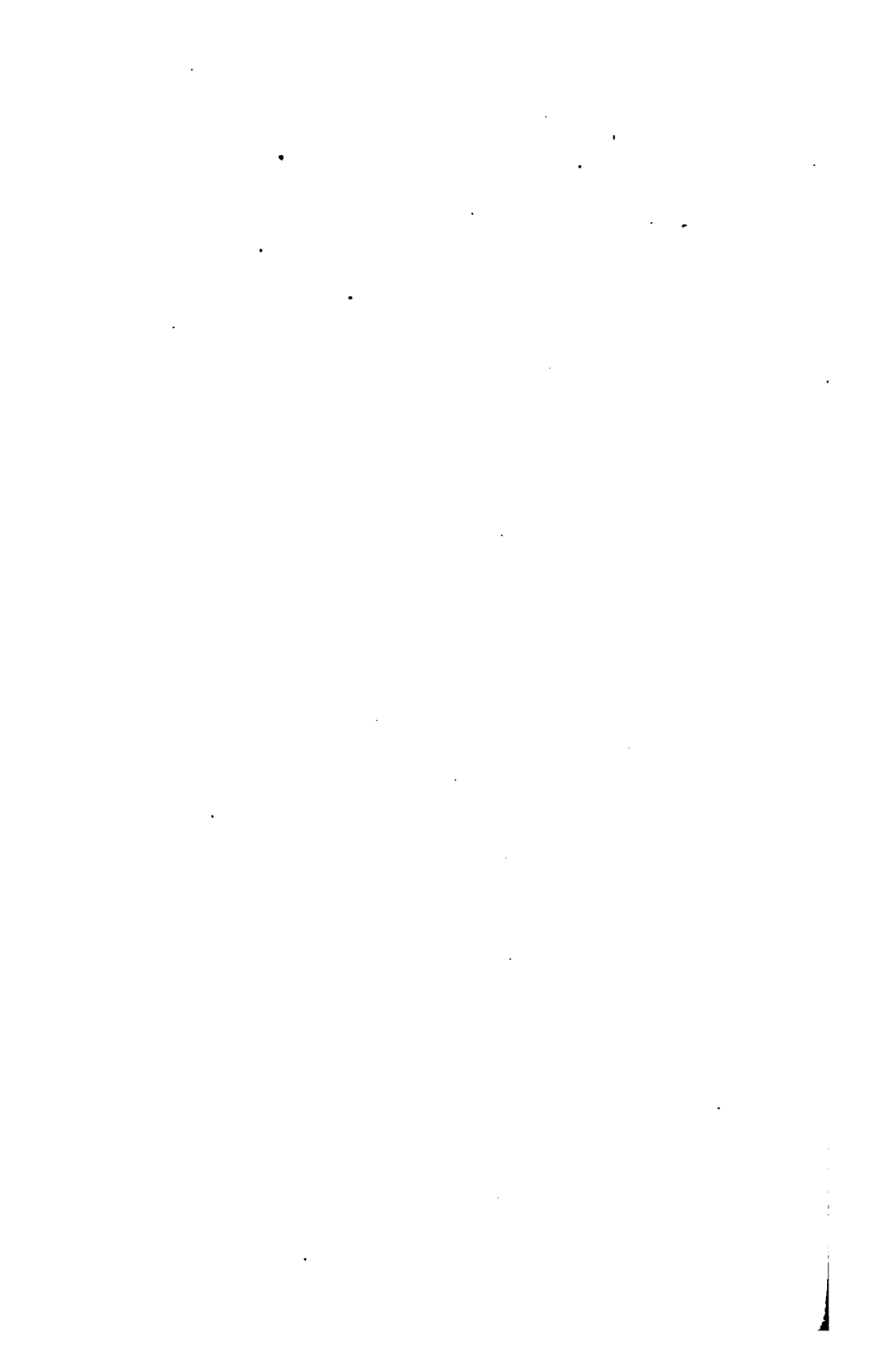
CHARLES F. BOOHER, Missouri.
THOMAS GALLAGHER, Illinois.
THOMAS J. SCULLY, New Jersey.
SAMUEL M. TAYLOR, Arkansas.
H. GARLAND DUPRÉ, Louisiana.
MARTIN DIES, Texas.
OSCAR L. GRAY, Alabama.
GEORGE K. DENTON, Indiana.
HUBERT F. FISHER, Tennessee.

CHARLES A. KENNEDY, Iowa.
ROBERT M. SWITZER, Ohio.
JAMES A. FREAR, Wisconsin.
DOW H. DRUKKER, New Jersey.
PETER E. COSTELLO, Pennsylvania.
S. WALLACE DEMPSEY, New York.
HENRY I. EMERSON, Ohio.
HENRY Z. OSBORNE, California.
RICHARD P. FREEMAN, Connecticut.

JANUARY 18, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE
1918



VERMILION RIVER, LA., AND CHANNEL TO CONNECT WITH INLAND WATERWAY.

COMMITTEE ON RIVERS AND HARBORS,
HOUSE OF REPRESENTATIVES,
January 18, 1918.

The committee met at 10.30 o'clock a. m., Hon. John H. Small (chairman) presiding.

The CHAIRMAN. Gentlemen, Mr. Martin is here and wishes to be heard briefly. We will hear you now, Mr. Martin, if it meets the approval of the committee.

STATEMENT OF HON. WHITMELL P. MARTIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA.

Mr. MARTIN. Mr. Chairman and gentlemen of the committee, I desire to present for your consideration a most worthy project, and one that should be given immediate consideration, to the end that a thousand people residing on the coast of Vermilion Parish may be permitted to communicate with the rest of the world, transmit their produce to market, and receive the necessities of life.

I refer to the creation of a cut-off channel to connect Bayou Vermilion with Schooner Bayou, La.

The people residing on Schooner Bayou, Little Prairie White Lake, Pecan Island, and Gran Cheniere, in the southern portion of Vermilion Parish, are absolutely dependent upon water transportation and have no other means of receiving their mail, transporting their produce, or of receiving supplies.

In order to reach Abbeville, the county seat of the parish of Vermilion, which is both their market and source of supply, they must cross Vermilion Bay and then go up Bayou Vermilion to Abbeville. The nearest railroad communication is at Abbeville, and as the land between Schooner Bayou and Abbeville is low, marshland, subject to tidal overflow, there can be no dirt roads constructed so as to give land communication.

Vermilion Bay is at the present time a necessary link in the only water route between Schooner Bayou and Abbeville, and it is this bay that is the cause of the present trouble and makes early relief imperative. Such small boats and water craft as are used to navigate this bay are not only subject to danger from storms and other disturbances, but the bay itself is so shallow for about one-half of the year that navigation is made hazardous and dangerous, and very frequently there can be no navigation at all, and more than 1,000 people are entirely cut off from communication with the mainland.

Permit me to read to your committee, a petition from the inhabitants of this section of the country, which very vividly and truthfully portrays conditions as they now exist:

We, the undersigned citizens of Vermilion Parish and the southeastern part of Cameron Parish, residing at the Government locks on Schooner Bayou, Little Prairie, White Lake, Pecan Island, and Grand Cheniere, and who use the Intercoastal Canal, the Schooner Bayou arm of Vermilion Bay, and the Vermilion River to reach Abbeville, hereby respectfully petition the United States Congress, through Representative Whit P. Martin, Senators R. F. Broussard, and Joseph E. Ransdell, and the War Department, through its proper officers, to construct a channel offering an all-the-year water route through the Intercoastal Canal from White Lake through to the Vermilion River. At present the Schooner Bayou arm of Vermilion Bay is impassable, on account of shallow water, at least 50 per cent of the time from October 15 to April 1 for boats drawing $2\frac{1}{2}$ feet of water or more. The lock tender at the Schooner Bayou Locks is unable to make his stated trips to Abbeville for supplies and instructions, often unable to get across the bay, and when in Abbeville is water bound for days and unable to return to his work. The mail boat from Pecan Island to Abbeville, that makes regular weekly trips, often is several days late in arriving or departing, on account of low water in the Vermilion Bay.

These conditions often subject us to hardships that we should not be forced to undergo. We would ask that this be remedied by cutting the short cut of the Intercoastal Canal from the Vermilion River to Schooner Bayou, entirely eliminating Vermilion Bay, and opening up a waterway that would have sufficient depth to traverse under the most adverse conditions.

This short cut has been up before the Congress of this country for some three or four years, appropriations for completing the work have been carried in at least two rivers and harbors bills, passed by the House but eliminated by the Senate as being an unworthy project. We are sure that if conditions were well understood in Washington, that it was known that the produce of more than one thousand persons, the business interest, and the pleasure and comfort of this same population depended upon the establishment of an adequate water route, then we are positive that there would be no quibbling or pork-barrel speech making, but that an adequate appropriation would be hastily made to furnish us the relief asked for.

For the information more clearly of conditions, we beg to advise you that our only means of transportation is by water; when our water channels are impassable we are hopelessly tied up, as a vast marsh lies between our habitations and the highlands. We would humbly pray that you provide a safe water route to and from Abbeville through the Vermilion River and Intercoastal Canal by constructing a short cut from the Vermilion River near its mouth to Schooner Bayou near its mouth, survey of such cut having already been made by the Government engineers and approved by the Engineering Department, and maps of this survey are on file in New Orleans and Washington.

When this project was being investigated by the local engineer, Maj. Edward H. Schulz, in 1913, Mr. D. L. McPherson, a prominent citizen and banker of Vermilion, who was thoroughly familiar with conditions, wrote the following letter, which was included in the report by Maj. Schulz, recommending the adoption of the project:

Relative to yours of the 19th, referring to improvement of the mouth of Vermilion River, beg to advise that the proposed short cut would be used entirely by all boats and commerce from the west to the Vermilion River or from the Vermilion River west. None of the western traffic would use the Vermilion Bay to reach the Vermilion River if the cut-off was made. At present the inadequate depth of the water in the Vermilion Bay from the mouth of the Vermilion River to Schooner Bayou deters the larger boats in the trade west of the Vermilion from extending their operation to the Vermilion River. During the fall and winter months none but very shallow-draft boats can cross the western arm of the Vermilion Bay from the mouth of the Vermilion River to Schooner Bayou. At present several boats that were in the trade regularly between Grand Cheniere, Leesburg, Lake Arthur, Lake Charles, and Pecan Island to Abbeville through the Intercoastal Canal have been forced to discontinue their trips on account of insufficient water depth in the Vermilion Bay to navigate. Without the cut-off connecting the Vermilion River with Schooner Bayou the

Intercoastal Canal west is practically useless. To attempt to open and keep open a channel through the Vermillion Bay from the Vermillion to Schooner Bayou would cost several times more than the cost of cutting a short cut connecting the two waterways.

I should say that from 50 to 75 boats pass in and out of the Vermillion River and through the Intercoastal Canal at present, some carrying freight, others pleasure craft. I am unable to state the number that would use the Intercoastal were sufficient water provided from the west that they could reach the Vermillion at all times. The water depth is so inadequate across the Vermillion Bay that the Post Office Department directs the mail from Pecan Island carried to Lake Arthur, La., in Calcasieu Parish, a longer haul, rather than risk having the mails tied up by low water in the Vermillion Bay.

A preliminary report and survey of this project was ordered in the rivers and harbors act of July 25, 1912, in the following language:

Vermillion River, La., and channel to connect Vermillion River with the inland waterway between Franklin and Mermentau at Schooner Bayou.

On December 10, 1912, Maj. Edward H. Schulz, Corps of Engineers, submitted an extensive and detailed report on this project to the Chief of Engineers, together with maps showing the feasibility and advisability of adopting the proposed project. This report will be found printed as House Document No. 1336, Sixty-second Congress, third session. After setting forth the dangers incident to the navigation of Vermillion Bay, and the fact that the low depth in the bay frequently impedes and prevents navigation, Maj. Schulz recommends the construction of a canal of about 4 miles in length, 40 feet wide, with a depth of 5 feet, connecting Schooner Bayou with the Vermillion River, thereby entirely eliminating Vermillion Bay from the all-water route from Schooner Bayou to Abbeville.

In the course of his report, Maj. Schulz uses the following language:

This cut-off, or canal, appears to be one of the most important portions of the entire Intercoastal Waterway. As a part of a wholly inland waterway connecting the Mississippi River with the Sabine River, avoiding entirely the shallow lakes and open bays, the construction of this section is warranted and recommended. Considered as a canal to connect the mouth of Bayou Vermillion with the mouth of Schooner Bayou, it also has the same advantage in avoiding the open waters and shallow bays, and is recommended. The necessary right of way, 300 feet in width, should be donated to the United States and has been promised, and is now being secured by the local interests.

On January 27, 1913, this matter was submitted to and passed upon by the Board of Engineers for Rivers and Harbors, who also recommended the construction of this canal in the following language:

It appears that the cut or canal proposed by the district officer will afford a safer and more reliable channel than the present exposed route, that it would give confidence to navigation interests, and would stimulate and encourage the development of commerce through the connecting inland waterway. For these reasons the board believes the improvement desirable, and it reports that in its opinion it is advisable for the United States to undertake the work in accordance with the estimate for route A-B at a cost of \$37,500 for first construction and \$1,800 thereafter for maintenance, provided the necessary right of way is furnished without cost to the United States. The initial appropriation should cover the whole amount of the estimate.

And finally, on February 1, 1913, Gen. W. H. Bixby, then Chief of Engineers, United States Army, also recommended the adoption and completion of this project in his report thereon to the Secretary of War. This report also appears in House Documents No. 1336.

Gen. Bixby in concluding his report and recommendation says:

After due consideration of the above-mentioned reports, I concur in general with the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore, in carrying out the instructions of Congress, I report as follows: That the improvement by the United States of Vermillion River, La., and channel to connect Vermillion River with the inland waterway between Franklin and Mermentau at Schooner Bayou is deemed advisable so far as to secure a channel depth of 5 feet and a channel width of 40 feet, increased at entrances and on curves and subject to the conditions specified by him, at an estimated cost of \$37,500 for first construction, and \$1,800 annually for maintenance, these estimates being based on the supposition that the construction work will, as now seems desirable and advantageous, be prosecuted under a first appropriation of the full amount of the estimate.

This project was carried in the rivers and harbors bill of last year, which failed of passage in the Senate. House bill 20079, as reported to the Senate February 10, 1917, with amendments, carried this paragraph on page 25:

For channel to connect Vermillion River with the inland waterway at Schooner Bayou, to afford a change in route for this part of the waterway between Franklin and Mermentau, in accordance with the report submitted in House Document No. 1336, Sixty-second Congress, third session, \$37,500.

That this project still has the approval of the War Department, which is only awaiting favorable action by Congress to do this important work, is shown by the following letter from Gen. Black, Chief of Engineers:

JANUARY 4, 1918.

My DEAR MR. MARTIN: 1. I have the honor to acknowledge the receipt of your letter of the 17th ultimo, inclosing a petition signed by certain citizens of Cameron and Vermillion Parishes, in favor of the creation of a cut-off canal to connect Bayou Vermillion with Schooner Bayou, La.

2. This work was recommended in a report printed as House Document No. 1336, Sixty-second Congress, third session, and proposed an improvement at an estimated cost of \$37,500. An item providing for the work was inserted in the river and harbor bill of a year ago which failed to become a law, as will be seen by reference to page 25, lines 11 to 18, inclusive, of the last print of the bill, H. R. 20079, Sixty-fourth Congress, second session.

3. This recommendation is still before Congress for action by the committees having the river and harbor bill in charge, and further action by the department is not permissible until authorized by Congress.

In paragraph 3 of the report of the Board of Engineers for Rivers and Harbors, the commerce of the Vermilion River is placed at 29,151 tons of a miscellaneous character, and it is stated that 95 per cent of this commerce comes from the west through the inland waterway and Schooner Bayou, and then crosses the open waters of Vermilion Bay to the mouth of the river. In computing this tonnage, however, I am satisfied that no consideration was given to the commerce carried by numerous small boats and water crafts operated by private parties, who carry their own produce to market and transport their own supplies.

As stated by Mr. McPherson in his letter, some 50 to 75 boats pass in and out of this course, and it is at once apparent that this number of boats would very much exceed in tonnage the estimate above given.

As above stated, many of the inhabitants on Pecan Island and other portions of this country own their own boats and market their

own produce and purchase and deliver their own supplies. This tonnage I am sure was not included in the estimate made in the report above referred to.

There are 1,000 or more people residing in this locality, who are engaged in the fish and oyster business, cattle raising, and agricultural pursuits, and the entire population is dependent upon an all-water route to get in touch with the mainland.

The ridges on Pecan Island and Grand Cheniere abound in oak timber which is now very much in demand in the construction of ships for use in the present war. But the shallow depth of water in the Vermilion Bay handicaps the delivery of this timber just at a time when it is most needed.

In conclusion permit me to say that this project is not only meritorious but is in the nature of an emergency.

These people have been asking for relief for many years and would have had it but for the failure of the rivers and harbors bill in the Senate last year. The total cost of this canal is only \$37,500 and its construction will afford immediate and permanent relief to a long-suffering people, who under existing conditions are not only putting up with a great hardship, but at times are suffering for the necessities of life, by reason of the fact that they have no means of communication with their only source of supply. I respectfully ask that this product be given favorable consideration and be included in the rivers and harbors bill of this session of Congress.

RIVER AND HARBOR APPROPRIATION BILL.

MAY 12, 1917.—Ordered to be printed.

Mr. KENNEDY of Iowa, from the Committee on Rivers and Harbors,
submitted the following

MINORITY REPORT.

[To accompany H. R. 4285.]

The minority of the Committee on Rivers and Harbors are opposed to the bill as reported by the majority of the committee. The reasons for this opposition need only be stated very briefly at this time. In these days of national crisis only necessary expenditures should be made for rivers and harbors work, and these should be based upon the important commercial, military, and naval needs of the Government. Taxes upon the people will be enormous, and should not be increased by expenditures for lines of work remotely connected with the present emergencies. Owing to the scarcity of labor and high prices for materials, contracts can not be let which will secure the amount of return to the Government possible under normal conditions.

The bill as reported carries an appropriation of about \$26,900,000. The bill which passed the House, but which failed to pass the Senate at the last session of Congress, carried about \$38,000,000. It can not, however, be argued that the present bill is a material reduction from the last one, as will be seen by an examination of certain items. The item of \$6,000,000 for the Mississippi River is now carried in the sundry civil bill. The appropriation of \$1,300,000 for the purchase of the Chesapeake & Delaware Canal is omitted, but a clause ultimately much more expensive is added by the item authorizing the condemnation of this obsolete waterway. The minority feel that the House should have a thorough understanding of what the condemnation of the Chesapeake & Delaware Canal really means. For many years an effort has been made to have this project assumed by the Government. It is a canal 13 miles long, supposedly having a depth of 9 feet which, if taken over by the Government, will mean an expenditure of from \$8,000,000 to \$12,000,000, or possibly more, in order to secure a depth of 12 feet. A wide stretch of imagination must be used to argue that this can possibly contribute to the present national emergency. It is a part of the so-called intercostal waterways for which strong influences have been at work. Congress has

already adopted portions of this system, and if by influential persuasion from time to time, additional sections are adopted, the proponents of the proposition will feel they can consistently argue that the whole system should be connected up by adoption of the final links. Untold millions are involved in this ambitious project. The minority urge that it should not be countenanced by the purchase of this canal as a war measure. It would be a splendid opportunity for owners of worthless stock and depreciated bonds to dispose of them to the Government that helped build this canal, but such financing is no part of the Government's war emergencies.

Two other large items are reduced, one reaching \$975,000 for the Columbia River and another of \$900,000 for the Beaufort Canal, but the general appropriation carried by this bill is in reality practically as large as that which passed the House at the last session. It is a sad commentary on legislative methods when Congress preaches conservatism and economy to the people of the country but itself would practice extravagance.

Many items contained in the bill as reported are susceptible to criticism even if war conditions did not prevail. It will be argued that the bill is regarded as an emergency measure. It is difficult to harmonize this view with the inclusion of such items as \$5,000,000 for the construction of locks and dams in the Ohio River, \$1,000,000 for improvement of the Lower Missouri River, and, as above mentioned, condemnation of the so-called \$8,000,000 to \$12,000,000 Chesapeake and Delaware Canal, as well as \$401,000 for the Tennessee and \$632,000 for the Cumberland Rivers, or \$1,200,000 for the upper Mississippi, and an indefinite amount for Los Angeles and Richmond, Cal., both of which last-named harbors show very decided appearances of reclamation schemes. Attention is also directed to a new item not carried in the House bill last session which appears on page 15, and reads as follows:

Waterway from the Mississippi River to the Sabine River, Louisiana: For maintenance, \$7,000; for completing improvement from Mementau River to Sabine River, Louisiana and Texas, in accordance with the report submitted in Senate Document Numbered Seven hundred and five, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$230,000; in all, \$237,000.

Attention is also called to items for new projects and maintenance of streams where testimony shows only one boat is in operation. Also, items appear for the removal of water hyacinth. The adoption of a \$100,000 new project on the Congaree is only cited by way of illustration of emergency items included.

With such items as the ones mentioned included in a bill supposed to be based upon the emergencies of the present war condition, this argument not only falls flat but almost becomes ridiculous. Just wherein such items as the above can be claimed to be for emergencies, the minority are unable to understand. The committee was informed that the bill was approved by the Secretary of War in behalf of national defense but the representative of the Chief of Engineers, informed the committee that the basis of approval of items was commercial needs rather than military necessities. The minority would suggest that if the bill was approved by the Secretary of War for national defense, either he or the Chief of Engineers should have appeared before the committee in response to its specific vote requesting their appearance to explain the various inconsistencies, rather than responding to the committee's vote by sending an assistant.

Attention is directed to the so-called "grouping system" wherein numerous items are placed under one appropriation, giving the Engineers authority to use the entire amount for any one or all of the items, as they may see fit. This is another effort to take away from Congress its control over appropriations and place it in the hands of department officials. We oppose the extension of these powers. The present bill is more objectionable in this respect than any of its predecessors because of this policy adopted by the Army Engineers who prepared the bill, and now ask Congress to O. K. their bill. Small items, including waterway projects of doubtful value are now grouped together, under the system referred to, in many instances with from a half dozen to 30 other projects in one group, and an appropriation of a lump sum is made to cover all, good, bad, and indifferent projects in that group. Certain projects in the group are given specific appropriations that do not appear in the bill, but any other project may be given all or any portion of the appropriation, because the bill provides that in the discretion of the Chief of Engineers and the Secretary of War any allotment or division may be made.

This provision enables Engineers to expend the money whenever and wherever they may choose on projects in the group, and even that construction may admit of a more liberal interpretation. The general grouping system, formerly confined to one or two groups, now prevents any effort to expose or abandon appropriations for small wasteful or useless waterways, because the plan covers good and bad items indiscriminately bunched or grouped. Wasteful projects can not well be subject to individual criticism, because the items are not separately set forth in the bill, nor are specific appropriations stated. This departure in methods, previously begun in a small way, permits the diversion of funds appropriated for legitimate waterways to be used for wasteful projects, and substitutes the determination of administrative officials for that of Congress.

There is now in the hands of the Army Engineers with which to meet emergencies an additional million dollars, which is a balance from the last lump sum appropriation bill and which can be used for the necessary maintenance and improvement of such adopted projects as the judgment of the engineers may decide.

But of still greater significance are the sheets made up for office use by the engineers, a copy of which is in the hands of the minority. There is hardly an item for which there is not on hand an ample balance to care for the needs of the projects for which Congress has made appropriations.

These sheets, following the title of improvement, have three columns marked as follows: 2. Balance unexpended March 1, 1917; 3. Balance available, exclusive of outstanding liabilities and contract obligations, March 1, 1917; 4. Estimated balance available, exclusive of outstanding liabilities and contract obligations, July 1, 1917.

The grand total under column 2, balance unexpended March 1, 1917, is \$50,132,978.77; the grand total under column 3, balance available, exclusive of outstanding liabilities and contract obligations, March 1, 1917, \$31,428,146.70; the grand total under column 4, estimated balance available, exclusive of outstanding liabilities and contract obligations, July 1, 1917, \$19,838,432.37.

The significant column is column 3, balance available, exclusive of outstanding liabilities and contract obligations, March 1, 1917.

This total is \$31,428,146. Can it possibly be claimed by the strongest advocates of the present bill that with over \$31,000,000 available for the maintenance and improvement of various projects in operation that there will be any detriment to river and harbor work should no bill be passed at the present session, if this money is efficiently used by those in charge of the work?

With the \$1,000,000 above referred to and this \$31,000,000, leaving available on March 1, 1917, over \$32,000,000, the minority insist that a further appropriation of nearly \$27,000,000 is gross extravagance and an indefensible burden on the taxpayers of the country.

Many new surveys, some 75 in number, are contained in the bill prepared by Army Engineers for the committee, and \$200,000 is set apart for that purpose. The minority believe such surveys, including many unimportant creeks and unknown waterways, should be abandoned for the present, and the Engineers thus released may then be assigned to their commands, where they properly belong in time of war. The only loss that would result from this course would probably be in a few votes for the bill. The Engineers were the leading members of their respective classes at West Point and the fewer engaged upon river and harbor work at this critical time the more able officers the country will have with the colors.

The minority desire to call attention to two serious objections to this as well as previous bills. One is "dribbling appropriations" for large improvements. There are several included in the present bill where new projects calling for very large ultimate expenditures are adopted with practically no appropriations. This is an unbusiness-like method of procedure although it may hold in check for the time being the neighborhoods directly affected by the projects. If the projects are worthy of adoption, it would seem to the minority they are worthy of the financial assistance necessary to carry them on. Future obligations thus assumed and piecemeal work lead to great extravagance, waste, and inefficiency. Over \$50,000,000 will be required to cover the 34 new projects adopted by this bill though the bill does not disclose that fact.

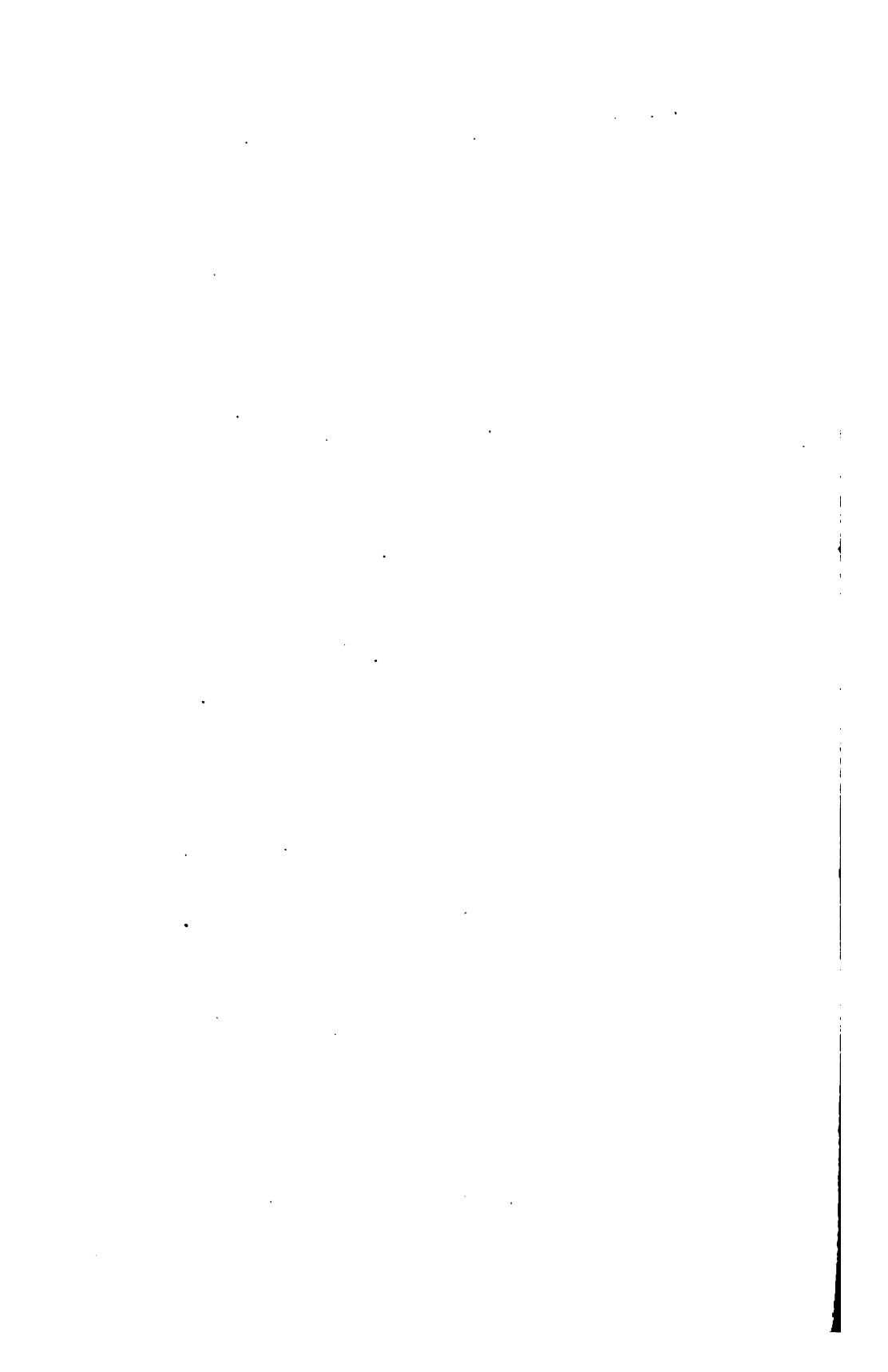
The minority are strongly opposed to section 14 whereby a waterways commission is established. The minority believe that at this time, members of the Cabinet and Army engineers can be more profitably engaged in war problems than in service upon such a commission. It is still another illustration of subordinating Congress to the executive departments. The committee was distinctly informed that unless this feature was incorporated in the bill any river and harbor bill would not be acceptable at this session of Congress.

It has been generally understood that the object of this special session was to consider only national defense legislation. The minority are not convinced that this bill is deserving of place in the list of new laws which have been or will soon be adopted under that designation. The bill in its present form is only the continuation of efforts to secure river and harbor legislation, portions of which invariably bears the justifiable designation of "pork." The minority do not approve of this class of legislation under any circumstances and especially are opposed to it under the guise of national preparedness.

The minority are convinced that the only items that can be justified at this time are of two classes. First, items of maintenance for meritorious projects that would retain the present channel depths or are of such commercial importance as to require continual attention. Second, such harbor improvements as are of value and importance in the general plan of better preparedness, considering both the commercial requirements and naval needs.

Unless the bill is materially amended along the lines suggested in this report, the minority of the committee believe that no rivers and harbors legislation should be passed in this critical time of our national life.

C. A. KENNEDY.
THOS. GALLAGHER.
ALLEN T. TREADWAY.
THOMAS J. SCULLY.
JAMES A. FREAR.
DOW H. DRUKKER.
H. I. EMERSON.



RIVERS AND HARBORS APPROPRIATION BILL.

AUGUST 2, 1917.—Ordered to be printed.

Mr. SMALL, from the committee of conference, submitted the following

CONFERENCE REPORT.

[To accompany H. R. 4285.]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 4285) making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its amendments numbered 2, 3, 8, 13, 16, 22, 24, and 42.

That the House recede from its disagreement to the amendments of the Senate numbered 4, 5, 6, 7, 12, 14, 15, 17, 18, 19, 20, 21, 23, 25, 26, 27, 33, 34, and 35, and agree to the same.

Amendment numbered 1:

That the House recede from its disagreement to the amendment of the Senate numbered 1, and agree to the same with an amendment as follows:

In lieu of the language proposed insert the following:

Waterway connecting Buzzards Bay and Cape Cod Bay, Massachusetts: The Secretary of War, the Secretary of the Navy, and the Secretary of Commerce are hereby authorized to examine and appraise the value of the works and franchises of the Cape Cod Canal, Massachusetts, connecting Buzzards and Cape Cod Bays, with reference to the advisability of the purchase of said canal by the United States and the construction over the route of the said canal of a free waterway, with or without a guard lock, and having a depth and capacity sufficient to accommodate the navigation interests that are affected thereby. This investigation shall be conducted under the direction of the Secretary of War and the supervision of the Chief of Engineers in the usual manner provided by law for making preliminary examinations and surveys except that the Secretary of War shall call upon the Secretary of the Navy and the Secretary of Commerce for such data and evidence as these Secretaries may wish to have incorporated in the report of survey, and further, that the final report of the investigation, with its conclusions upon probable cost and commercial advantages, and military and naval uses of the said canal, shall be submitted to the Secretary of War, the

Secretary of the Navy, and the Secretary of Commerce for their action before it is transmitted to Congress.

If the said Secretaries are all in favor of the acquisition of the said canal, the Secretary of War is hereby further authorized to enter into negotiations for its purchase, including all property, franchises, and appurtenances used or acquired for use in connection therewith or appertaining thereto; and he is further authorized, if in the judgment of the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce, that the price for such canal is reasonable and satisfactory, to make contracts for the purchase of the same, at the option of the United States, subject to future ratification and appropriation by the Congress; or, in the event of the inability of the Secretary of War to make a satisfactory contract for the voluntary purchase of said Cape Cod Canal and its appurtenances, he is hereby authorized and directed, through the Attorney General, to institute and carry to completion proceedings for the condemnation of said canal and its appurtenances, the acceptance of the award in said proceedings to be subject to the future ratification and appropriation by Congress. Such condemnation proceedings shall be instituted and conducted in, and jurisdiction of said proceedings is hereby given to the district court of the United States for the district of Massachusetts, substantially as provided in "An Act to authorize condemnation of land for sites for public buildings, and for other purposes," approved August first, eighteen hundred and eighty-eight; and the sum of \$5,000 is hereby appropriated to pay the necessary costs thereof and expenses in connection therewith. The Secretary of War is further authorized and directed to report the proceedings hereunder to Congress.

Transfer item so modified to page 32 of bill, after line 3; and the Senate agree to the same.

Amendment numbered 9:

That the House recede from its disagreement to the amendment of the Senate numbered 9, and agree to the same with an amendment as follows:

In the proposed amendment, after the words "as may be necessary," insert the following: *subject to such terms of local cooperation as the Secretary of War may prescribe, not to exceed one-half the cost of the improvement; and the Senate agree to the same.*

Amendment numbered 10:

That the House recede from its disagreement to the amendment of the Senate numbered 10, and agree to the same with an amendment as follows:

In the proposed amendment strike out the words "to Committee on Commerce on March twenty-ninth, nineteen hundred and seventeen," and after the words "Numbered Fifty-seven" insert the following: *Sixty-fifth Congress, first session; and the Senate agree to the same.*

Amendment numbered 11:

That the House recede from its disagreement to the amendment of the Senate numbered 11, and agree to the same with an amendment as follows:

Transfer item to space occupied by amendment No. 20, following Hayden Slough survey item; and the Senate agree to the same.

Amendment numbered 28:

That the House recede from its disagreement to the amendment of the Senate numbered 28, and agree to the same with an amendment as follows:

At the beginning of the proposed amendment insert the words *Sec. 9.*; near the end of the first paragraph strike out the words: "or by any plant or facility engaged in the execution of any public project or river and harbor improvement"; and in the second paragraph strike out the word "act" and insert in lieu thereof the word *section*; and the Senate agree to the same.

Amendment numbered 29:

That the House recede from its disagreement to the amendment of the Senate numbered 29, and agree to the same with an amendment as follows:

In the proposed amendment change the number of the section from "9" to 10; and the Senate agree to the same.

Amendment numbered 30:

That the House recede from its disagreement to the amendment of the Senate numbered 30, and agree to the same with an amendment as follows:

In the proposed amendment change the number of the section from "10" to 11; and the Senate agree to the same.

Amendment numbered 31:

That the House recede from its disagreement to the amendment of the Senate numbered 31, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "11" to 12; and the Senate agree to the same.

Amendment numbered 32:

That the House recede from its disagreement to the amendment of the Senate numbered 32, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "12" to 13; and the Senate agree to the same.

Amendment numbered 36:

That the House recede from its disagreement to the amendment of the Senate numbered 36, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "13" to 14; and the Senate agree to the same.

Amendment numbered 37:

That the House recede from its disagreement to the amendment of the Senate numbered 37, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "14" to 15; and the Senate agree to the same.

Amendment numbered 38:

That the House recede from its disagreement to the amendment of the Senate numbered 38, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "15" to 16; and the Senate agree to the same.

Amendment numbered 39:

That the House recede from its disagreement to the amendment of the Senate numbered 39, and agree to the same with an amendment as follows:

In the proposed amendment change the number of the section from "16" to 17; and the Senate agree to the same.

Amendment numbered 40:

That the House recede from its disagreement to the amendment of the Senate numbered 40, and agree to the same with an amendment as follows:

In the proposed amendment change the section number from "17" to 18; and the Senate agree to the same.

Amendment numbered 41:

That the House recede from its disagreement to the amendment of the Senate numbered 41, and agree to the same with an amendment as follows: In the proposed amendment change the number of the section from "18" to 19, and after the words "civil life" in line 19, page 11, of Senate amendments, insert the following words: *and the remaining five of whom may each be selected either from civil life or the public service*; and strike out the words "it may adopt" in line 21, page 11, of Senate amendments, and insert in lieu thereof the following words: *the President may prescribe, and subject to the approval of the heads of the several executive departments concerned*; and after the words "active list" in line 24, page 12, of Senate amendments, insert the following words: *and no member selected from the public service shall receive additional compensation for services on said commission*; so that the amended section will read as follows:

SEC. 19. *That a commission, to be known as the Waterways Commission, consisting of seven members to be appointed by the President of the United States, at least one of whom shall be chosen from the active or retired list of the Engineer Corps of the Army, at least one of whom shall be an expert hydraulic engineer from civil life, and the remaining five of whom may each be selected either from civil life or the public service, is hereby created and authorized, under such rules and regulations as the President may prescribe, and subject to the approval of the heads of the several executive departments concerned, to bring into coordination and cooperation the engineering, scientific, and constructive services, bureaus, boards, and commissions of the several governmental departments of the United States and commissions created by Congress that relate to the study, development, or control of waterways and water resources and subjects related thereto, or to the development and regulation of interstate and foreign commerce, with a view to uniting such services in investigating, with respect to all watersheds in the United States, questions relating to the development, improvement, regulation, and control of navigation as a part of interstate and foreign commerce, including therein the related questions of irrigation, drainage, forestry, arid and swamp land reclamation, clarification of streams, regulation of flow, control of floods, utilization of water power, prevention of soil erosion and waste, storage and conservation of water for agricultural, industrial, municipal, and domestic uses, cooperation of railways and waterways, and promotion of terminal and transfer facilities, to secure the necessary data, and to formulate and report to Congress, as early as practicable, a comprehensive plan or plans for the development of waterways and the water resources of the United States*

for the purposes of navigation and for every useful purpose, and recommendations for the modification or discontinuance of any project herein or heretofore adopted. Any member appointed from the retired list shall receive the same pay and allowances as he would if on the active list, and no member selected from the public service shall receive additional compensation for services on said commission, and members selected from civil life shall receive compensation of \$7,500 per annum.

In all matters done, or to be done, under this section relating to any of the subjects, investigations, or questions to be considered hereunder, and in formulating plans, and in the preparation of a report or reports, as herein provided, consideration shall be given to all matters which are to be undertaken, either independently by the United States or by cooperation between the United States and the several States, political subdivisions thereof, municipalities, communities, corporations, and individuals within the jurisdiction, powers, and rights of each, respectively, and with a view to assigning to the United States such portion of such development, promotion, regulation, and control as may be undertaken by the United States, and to the States, political subdivisions thereof, municipalities, communities, corporations, and individuals such portions as belong to their respective jurisdictions, rights, and interests.

The commission is authorized to employ, or retain, and fix the compensation for the services of such engineers, transportation experts, experts in water development and utilization, and constructors of eminence as it may deem necessary to make such investigations and to carry out the purposes of this section. And in order to defray the expenses made necessary by the provisions of this section there is hereby authorized to be appropriated such sums as Congress may hereafter determine, and the sum of \$100,000 is hereby appropriated, available until expended, to be paid out upon warrants drawn on the Secretary of the Treasury by the chairman of said commission.

The commission shall have power to make every expenditure requisite for and incident to its authorized work, and to employ in the District of Columbia and in the field such clerical, legal, engineering, artistic, and expert services as it may deem advisable, including the payment of per diem in lieu of subsistence for employees engaged in field work or traveling on official business, rent of offices in the District of Columbia and in the field, and the purchase of books, maps, and office equipment.

Nothing herein contained shall be construed to delay, prevent, or interfere with the completion of any survey, investigation, project, or work herein or heretofore or hereafter adopted or authorized upon or for the improvement of any of the rivers or harbors of the United States or with legislative action upon reports heretofore or hereafter presented.

And the Senate agree to the same.

JNO. H. SMALL,
CHAS. F. BOOHER,
Managers on the part of the House.

DUNCAN U. FLETCHER,
JOS. E. RANSDALL,
KNUTE NELSON,
Managers on the part of the Senate.

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE.

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 4285) making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, submit the following written statement explaining the effect of the action agreed upon:

The rivers and harbors bill as it passed the House carried cash appropriations in the sum of \$27,698,150. The amount added by amendment in the Senate was \$194,000 in cash appropriations, making the total of the bill as it passed the Senate \$27,890,150. As a result of the conference the amount involved in the Senate amendments has been reduced from \$194,000 to \$130,000, making the total of the bill as it now stands \$27,826,150.

The following statement shows the action taken by the conference on each of the Senate amendments:

Amendment No.	Page of bill.	Action of conference.
1	2	Waterway connecting Buzzards Bay with Cape Cod Bay, Mass.: Item authorizes negotiations to be entered into for the acquisition of the Cape Cod Canal by purchase or condemnation proceedings, and appropriates \$5,000 for the necessary expenses. House conferees recede with an amendment providing for an investigation and authorizing the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce, if, after such investigation they think it advisable, to negotiate for the acquisition of said canal either by purchase or condemnation proceedings.
2, 3	11	James, Nansemond, Pagan, and Appomattox Rivers, Va.: Item reduces amount appropriated in House bill for maintenance from \$26,000 to \$15,000. Senate conferees recede.
4	12	Contentnea Creek: Item changes spelling to "Contentnea." House conferees recede.
5	17	Mobile Harbor, Ala.: Item removes the conditions precedent to the adoption of the project. House conferees recede.
6	21	Corrects a typographical error in House bill. House conferees recede.
7	25	Memphis Harbor, Mississippi River, at the mouth of Wolf River: Item directs the Mississippi River Commission to make plans and take such steps as will remove the large sand bar in front of Memphis to such an extent as may be necessary in the interest of navigation, expense to be paid out of funds heretofore or hereafter appropriated for the work of the Mississippi River Commission. House conferees recede.
8	26	Missouri River, between Sioux City and Fort Benton: Item amends House provision appropriating \$50,000 for maintenance by appropriating \$50,000 additional for continuing revetment work on both sides of the river below the bridge at Bismarck, N. Dak., and \$25,000 additional for removal of snags and rock in the channel between Fort Benton, Mont., and Pierre, S. Dak. Senate conferees recede.
9	26	Missouri River, between Kansas City and the mouth: Item provides that of the sum appropriated in House bill, \$25,000, or so much thereof as may be necessary, shall be expended in protecting the banks and confining the river at Cambridge Bend, near Glasgow, Mo. Item also provides for the transfer to the Missouri River of two dredges not necessarily employed elsewhere. House conferees recede with an amendment making the expenditure conditional upon local cooperation to such extent as the Secretary of War may prescribe, such cooperation not to exceed one-half the cost of the improvement.

Amendment No.	Page of bill.	Action of conference.
10	30	Columbia River, Oreg. and Wash.: Effect of item is to increase project depth in Columbia River from Brookfield to the mouth from 26 feet to 30 feet. House conferees recede with verbal amendment.
11	34	Columbia and lower Willamette Rivers, Oreg. and Wash.: Item provides for a survey with a view to securing a channel 35 feet deep. House conferees recede with an agreement to transfer provision to p. 41 of bill.
12	34	Survey of inland waterway along the southern shore of Long Island from Jamaica Bay to Peconic Bay: Item strikes out House provision ordering a new survey and inserts provision amending item for similar survey in river and harbor act approved Mar. 2, 1907, by providing for a channel of suitable depth and width instead of for a channel 100 feet wide and 6 feet deep. House conferees recede.
13	35	Survey of Northwest River, Va. and N. C.: Senate conferees recede.
14	35	Survey of Northwest River, Va. and N. C.: Item amends House provision verbally. House conferees recede.
15	37	Survey of Indian and Halifax Rivers, Fla.: House conferees recede.
16	38	Survey of Tchula Lake, Miss.: Senate conferees recede.
17	38	Survey of Atchafalaya River, Bayous Courtableau, Teche, and Vermilion, with a view to forming navigable connections between said streams: House conferees recede.
18	39	Instrumental survey of Black River, Ark. and Mo.: House conferees recede
19	41	Survey of Petaluma Creek, Cal.: House conferees recede.
20	41	Survey of Columbia River from Brookfield, Wash., to the mouth: Item strikes out House provision. (This provision is embodied in amendment No. 11.) House conferees recede.
21	42	Survey of East Channel, Coos River, Oreg.: House conferees recede.
22, 23	43	Items amend House proviso that no survey provided for in the bill shall be made until after the close of the war with Germany except such as the Secretary of War shall recommend as associated with the prosecution of the war, by including examinations as well as surveys, and by substituting the word "direct" for the words "recommend as associated with the prosecution of the war." House conferees recede with an amendment which will permit examinations to be made.
24	43	Item provides for the leasing of surplus water flowing over the dams at Lake Winnibigoshish and Lake Pokegama, Minn., to municipal or other public service corporations, and that the moneys paid for same shall be used for maintenance of the dams and the improvement of navigation in the headwaters of the Mississippi River. Senate conferees recede.
25	43	Item provides that the States of Minnesota, North Dakota, and South Dakota, or any two of them, may enter into agreements to aid in improving navigation and to control floods on the boundary waters of said States and waters tributary thereto, and appropriates \$25,000 to enable the Secretary of War to make surveys of any projects proposed by said States. House conferees recede.
26	44	Item renumbering section of House bill. House conferees recede.
27	45	Item renumbering section of House bill. House conferees recede.
28	45	Item authorizes the Secretary of War to prescribe regulations for the use and navigation of any portion of areas of the navigable waters of the United States, or waters under the jurisdiction of the United States, endangered by Coast Artillery fire in target practice or otherwise, or by the proving operation of the Government ordnance proving ground at Sandy Hook, N. J., or near any Government ordnance proving ground that may be established on or near such waters, and of any portion of said waters occupied by submarine mines, mine fields, cables, etc., and to regulate the transportation of explosives upon any of said waters. House conferees recede, with an amendment making a separate section of the amendment and striking out matter covered in the preceding section.
29, 30, 31, 32, 33, 34, 35	46, 47, 48	Items renumbering sections of House bill. House conferees recede, with amendments changing the numbers of the sections.
	48, 49	Items changing typographical and verbal errors in sec. 10 of House bill, permitting the Betterton-Morgan Co. (Inc.) to construct docks upon tidelands at Seattle, Wash., for a reasonable rental. House conferees recede.
36	49	Item provides that funds hereafter received from private parties for rental of Government plant in connection with the prosecution of river and harbor works shall be deposited to the credit of the appropriation to which the plant belongs. House conferees recede with an amendment changing the number of the section.
37	50	Item renumbering section of House bill. House conferees recede.
38	51	Item declares Mosquito Creek, S. C., to be a nonnavigable stream. House conferees recede.
39	51	Item declares Bayou Meto, Ark., to be a nonnavigable stream. House conferees recede.
40	51	Item declares St. Marys River, Ohio and Ind., to be a nonnavigable stream. House conferees recede.

Amendment No.	Page of bill.	Action of conference.
41	52	<p>Item provides for the creation of a waterways commission consisting of 7 members to be appointed by the President, with a view to bringing into coordination all the services of the governmental departments and commissions that relate to study, development, or control of waterways and subjects related thereto, and with a view to making investigations and reports to Congress on comprehensive plans for the development of waterways for every useful purpose, and recommendations for the modification or discontinuance of any project herein or heretofore adopted, consideration being given to the cooperation between the United States and States or subdivisions thereof, or other local interests, in improvement works to be recommended.</p> <p>House recedes with amendments providing that appointments to membership on the commission can be made from civil life or the public service; that the rules and regulations to bring into coordination and cooperation the several services of the Government and commissions appointed by Congress shall be prescribed by the President, subject to the approval of the heads of the several executive departments; and that no member selected from the public service shall receive additional compensation for services on said commission.</p>
42	55	<p>Item adopts the following section:</p> <p>SEC. 19. That the Auditor of the Treasury is hereby restrained from allowing the Secretary of the Treasury, and all other officials of the Treasury Department are hereby restrained from paying any claims against the Government on account of labor, supplies, materials, or cash furnished to the contractor or the subcontractor and used in the construction of the Corbett Tunnel, a part of the Shoshone irrigation project, in the State of Wyoming, until the provisions of this section are complied with. The Secretary of the Interior shall investigate and hear evidence and determine what may be reasonable compensation to reimburse Mrs. Katherine Macdonald for time and services devoted to procuring an appropriation by Congress for the payment of such claims, and when he may so determine such sum shall be deducted pro rata from all such claims as have been or may be allowed and paid to the said Mrs. Katherine Macdonald, and the residue thereof paid pro rata to the persons holding such claims.</p> <p>Senate conferees recede.</p>

All of which is respectfully submitted.

JNO. H. SMALL,
CHAS. F. BOOHER,
Managers on the part of the House.



[PUBLIC—No. 37—65TH CONGRESS.]

[H. R. 4285.]

An Act Making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums of money be, and are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to be immediately available, and to be expended under the direction of the Secretary of War and the supervision of the Chief of Engineers, for the construction, completion, repair, and preservation of the public works hereinafter named:

Portland Harbor, Maine: For completing improvement in accordance with the report submitted in House Document Numbered Seventy-one, Sixty-fifth Congress, first session, and subject to the conditions set forth in said document, \$300,000.

Boston Harbor, Massachusetts: The unexpended balances of appropriations heretofore made and authorized for this improvement are hereby made available for improvement in accordance with the report submitted in House Document Numbered Nine hundred and thirty-one, Sixty-third Congress, second session.

Gloucester, Beverly, Salem, Lynn, Plymouth, and Provincetown Harbors, Mystic, Malden, Weymouth Fore and Weymouth Back Rivers, and Dorchester Bay and Neponset River, Massachusetts: For maintenance, \$24,000.

Providence River and Harbor, Pawtucket River, Newport Harbor, harbors of refuge at Point Judith and Block Island, entrance to Point Judith Pond, and Great Salt Pond, Block Island, Rhode Island: The unexpended balances of appropriations heretofore made for improvement of Providence River and Harbor in accordance with the report submitted in House Document Numbered Nine hundred and nineteen, Sixtieth Congress, first session, are hereby made available for improvement of said river and harbor in accordance with the report submitted in House Document Numbered Thirteen hundred and sixty-nine, Sixty-second Congress, third session.

Stonington and New London Harbors, Connecticut, Pawcatuck River, Rhode Island and Connecticut, and Mystic and Thames Rivers, Connecticut: For maintenance, \$10,000; for completing improvement of New London Harbor, \$160,000; in all, \$170,000.

Duck Island, Branford, New Haven, Milford, Bridgeport, Southport, Norwalk, Five Mile River, Stamford, and Greenwich Harbors, Westport Harbor and Saugatuck River, breakwaters at New Haven, and Housatonic River, Connecticut: For maintenance, \$71,000.

Connecticut River above and below Hartford, Connecticut: Continuing improvement and for maintenance below Hartford, \$70,100.

Burlington Harbor, Vermont; Plattsburg and Port Henry Harbors, New York; and Narrows of Lake Champlain, New York and Vermont: For maintenance, \$5,000; for improvement of Narrows of Lake Champlain in accordance with the report submitted in House

Document Numbered Thirteen hundred and eighty-seven, Sixty-second Congress, third session, and subject to the conditions set forth in said document, \$300,000; for completing improvement of Port Henry Harbor in accordance with the report submitted in House Document Numbered Three hundred and sixty-nine, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$71,500; in all, \$376,500.

Olcott, Charlotte, Pultneyville, Great Sodus Bay, Little Sodus Bay, Oswego, Cape Vincent, and Ogdensburg Harbors, New York: For maintenance, \$33,500.

Port Chester, Mamaroneck, and Echo Bay Harbors, East Chester and Westchester Creeks, and Bronx River, New York: Completing improvement of East Chester Creek, \$11,000.

Saugerties, Rondout, Peekskill, and Tarrytown Harbors, and Wappinger Creek, New York: For maintenance, \$3,500.

New York Harbor, New York: For maintenance of entrance channels and for improvement of the upper bay opposite anchorage grounds in accordance with the report submitted in House Document Numbered Five hundred and eighteen, Sixty-third Congress, second session, and at Craven Shoal in accordance with the report submitted in House Document Numbered Five hundred and fifty-seven, Sixty-fourth Congress, first session, \$40,000, and the unexpended balances of appropriations heretofore made and authorized for the improvement and maintenance of the entrance channels are hereby made available for continuing improvement in accordance with the reports submitted in said documents; for improvement of channel between Staten Island and Hoffman and Swinburne Islands, in accordance with the report submitted in House Document Numbered Six hundred and twenty-five, Sixty-fourth Congress, first session, \$50,000; in all, \$90,000.

Hudson River Channel, New York Harbor, New York: Continuing improvement, \$210,500; for improvement in accordance with the report submitted in House Document Numbered Sixteen hundred and ninety-seven, Sixty-fourth Congress, second session, \$600,000; in all, \$810,500.

Black Rock Channel and Tonawanda Harbor, New York: The unexpended balances of appropriations heretofore made and authorized for this improvement are hereby made available for Lake Erie entrance to Black Rock Channel and Erie Basin and for widening the channel at the bend.

East River, New York: For improvement in accordance with the report submitted in House Document Numbered One hundred and eighty-eight, Sixty-third Congress, first session, and for a forty-foot channel through East River and Hell Gate, in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session, \$1,250,000: *Provided*, That the unexpended balances of appropriations heretofore made and authorized for the improvement of East River and Hell Gate are hereby made available for improvement in accordance with the reports submitted in said document: *Provided further*, That a depth of forty feet is authorized across Diamond Reef: *And provided further*, That so much as may be necessary of this and any other appropriations made herein or hereafter for specific portions of New York Harbor and its immediate tributaries may be allotted by the

Secretary of War for the maintenance of these waterways by the collection and removal of drift.

Keyport and Shoal Harbors, Woodbridge, Cheesequake, Matawan, and Compton Creeks, Elizabeth, Raritan, South, and Shrewsbury Rivers, and Raritan Bay, New Jersey: For maintenance, \$58,000.

Cold Spring and Absecon Inlets, Absecon and Tuckerton Creeks, and Toms River, New Jersey: For maintenance, \$35,000.

Cooper, Salem, Cohansey, and Maurice Rivers, Woodbury, Mantua, Raccoon, Oldmans, and Alloway Creeks, New Jersey: For maintenance, \$23,000; continuing improvement and for maintenance of Maurice River, \$25,000; in all, \$48,000.

Pittsburgh Harbor, Pennsylvania: For maintenance, \$5,000.

Schuylkill River, Pennsylvania: For improvement in accordance with the report submitted in House Document Numbered Twelve hundred and seventy, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$300,000.

Delaware River, Pennsylvania, New Jersey, and Delaware: Continuing improvement and for maintenance from Allegheny Avenue, Philadelphia, to the sea, \$1,870,000; for maintenance of improvement from Allegheny Avenue, Philadelphia, to Lalor Street, Trenton, \$40,000; in all, \$1,910,000.

Wilmington Harbor, Delaware: For maintenance, \$50,000.

Appoquinimink, Smyrna, Leipsic, Little, Saint Jones, Murderkill, Mispillion, and Broadkill Rivers, Delaware: For maintenance, \$30,000.

Government iron pier in Delaware Bay near Lewes, Delaware: For maintenance and repair in accordance with the report submitted in House Document Numbered Ten hundred and fifty-nine, Sixty-fourth Congress, first session, \$68,000.

Waterway between Rehoboth Bay and Delaware Bay, Delaware: Continuing improvement and for maintenance, \$50,000.

Waterway from Chincoteague Bay, Virginia, to Delaware Bay at or near Lewes, Delaware: For maintenance, \$1,000.

Improving inland waterway from Delaware River to Chesapeake Bay, Delaware and Maryland, in accordance with the project recommended by the Chief of Engineers in House Document Numbered Three hundred and ninety-one, Sixty-second Congress, second session, and in paragraph three of his report, dated August ninth, nineteen hundred and thirteen, as published in House Document Numbered One hundred and ninety-six, Sixty-third Congress, first session: The Secretary of War is hereby authorized to enter into negotiations for the purchase of the existing Chesapeake and Delaware Canal, and all the property, rights of property, franchises, and appurtenances used or acquired for use in connection therewith or appertaining thereto; and he is further authorized, if in his judgment the price is reasonable and satisfactory, to make a contract for the purchase of the same, subject to future ratification and appropriation by Congress. In the event of the inability of the Secretary of War to make a satisfactory contract for the voluntary purchase of said canal and its appurtenances, he is hereby authorized and directed through the Attorney General to institute and to carry to completion proceedings for the condemnation of the said canal and its appurtenances, the acceptance of the award in said proceedings to be subject to future ratification and appropriation by Congress.

Such condemnation proceedings shall be instituted and conducted in, and jurisdiction of said proceedings is hereby given to, the District Court of the United States for the District of Delaware substantially as provided in "An Act to authorize condemnation of land for sites for public buildings, and for other purposes," approved August first, eighteen hundred and eighty-eight, and the sum of \$5,000 is hereby appropriated to pay the necessary costs thereof and expenses in connection therewith.

Baltimore Harbor and Channels, Maryland: For maintenance of Patapasco River and Channel to Baltimore, including channel of approach at York Spit, Chesapeake Bay, \$104,000; for improvement in accordance with the report submitted in House Document Numbered Seven hundred and ninety-nine, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$250,000; and the Secretary of War is hereby authorized to prosecute maintenance work in the inner harbor in accordance with the recommendation submitted in said document; in all, \$354,000.

Rockhall, Queenstown, Claiborne, Tilghman Island, Cambridge, and Crisfield Harbors, Elk and Little Elk, Chester, Corisca, Choptank, Tuckahoe, Warwick, La Trappe, Tred Avon, Wicomico, Manokin, and Pocomoke Rivers, Slaughter, Tyaskin, and Broad Creeks, Twitch Cove and Big Thoroughfare River, and Lower Thoroughfare, Deal Island, Maryland; Nanticoke River (including Northwest Fork), Delaware and Maryland; and Broad Creek River, Delaware: For maintenance, \$15,800.

Potomac River, at Washington, District of Columbia, at Alexandria, Virginia, and at Lower Cedar Point, Maryland, Anacostia River, District of Columbia, Occoquan, Aquia, Upper Machodoc, and Nomini Creeks, Virginia: For maintenance, \$30,000.

Norfolk Harbor and Channels, Virginia: For improvement, including channel to Newport News, in accordance with the report submitted in House Document Numbered Six hundred and five, Sixty-third Congress, second session, and in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session, item "B," page five, \$900,000. The unexpended balance of appropriations heretofore made for improvement of channel to Norfolk, Virginia, is hereby made available for continuing improvement of said channel in accordance with the report submitted in said document.

Rappahannock, Mattaponi, and Pamunkey Rivers, Urbana Creek and Milford Haven Harbor, Virginia: For maintenance, \$15,000.

James, Nansemond, Pagan, and Appomattox Rivers, Virginia: For maintenance, \$26,000; continuing improvement of James River, \$46,000; in all, \$72,000.

Blackwater River, Virginia: Meherrin and Roanoke Rivers, North Carolina: For maintenance, \$2,500.

Waterway from Norfolk, Virginia, to Beaufort Inlet, North Carolina: Continuing improvement, \$100,000: *Provided*, That the route of the waterway may, in the discretion of the Secretary of War, be modified in accordance with the report submitted in House Document Numbered Fourteen hundred and seventy-eight, Sixty-third Congress, third session: *And provided further*, That not more than \$75,000 shall be expended in acquiring the necessary rights of way between Albemarle Sound and Pungo River.

Manteo Bay, Scuppernong, Pamlico, Tar, South, Bay, Neuse, and Trent Rivers, Fishing, Contentnea, Swift, and Smith Creeks, and waterway connecting Swan Quarter Bay with Deep Bay, North Carolina: For maintenance, \$15,500.

Beaufort and Morehead City Harbors, Beaufort Inlet, waterway from Pamlico Sound to Beaufort Inlet, waterway connecting Core Sound and Beaufort Harbor, and inland waterway Beaufort to Jacksonville, North Carolina: For maintenance, \$35,500; and the unexpended balances of appropriations heretofore made for New River, North Carolina, are hereby made available for the improvement of the inland waterway, Beaufort to Jacksonville, North Carolina, in accordance with the report submitted in House Document Numbered Seventeen hundred and seventy-five, Sixty-fourth Congress, second session.

Northeast, Black, and Cape Fear Rivers, North Carolina: For maintenance, \$85,000; completing improvement of Cape Fear River below Wilmington, \$35,000; in all, \$120,000.

Charleston Harbor and Channels, South Carolina: For maintenance, \$40,000; for improvement in accordance with the report submitted in House Document Numbered Two hundred and eighty-eight, Sixty-second Congress, second session, and subject to the conditions set forth in said document, \$70,000; for maintenance of Ashley River Channel, \$10,000; in all, \$120,000.

Winyah Bay, Waccamaw, Little Peedee, and Great Peedee Rivers, South Carolina: For maintenance, \$70,000.

Santee, Wateree, and Congaree Rivers, South Carolina: For maintenance, including the Estherville-Minim Creek Canal and the Congaree River as far up as the Gervais Street Bridge, Columbia, and for improvement of the Congaree River in accordance with the report submitted in House Document Numbered Seven hundred and two, Sixty-third Congress, second session, \$80,000.

Waterway between Beaufort, South Carolina, and Saint Johns River, Florida: Continuing improvement and for maintenance, \$43,000.

Savannah Harbor, and Savannah River, below, at, and above Augusta, Georgia: For maintenance, \$380,000; for improvement of Savannah Harbor in accordance with the report submitted in House Document Numbered Fourteen hundred and seventy-one, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$500,000: *Provided*, That no expense shall be incurred by the United States for acquiring any lands required for the purpose of this improvement; in all, \$880,000.

Sapelo, and Darien Harbors, Cowhead, and Satilla Rivers, Club, Plantation, and Fancy Bluff Creeks, Georgia, and Saint Marys River, Georgia and Florida: For maintenance, \$12,500.

Brunswick Harbor, Georgia: For maintenance, \$33,250.

Altamaha, Oconee, and Ocmulgee Rivers, Georgia: Continuing improvement and for maintenance, \$40,000.

Indian River, Saint Lucie Inlet, Miami Harbor (Biscayne Bay), and Harbor at Key West, Florida: For maintenance, \$6,000; completing improvement of Miami Harbor, \$160,000: *Provided*, That the work proposed under the project adopted by the river and harbor Act approved July twenty-fifth, nineteen hundred and twelve, may be done by contract if reasonable prices can be obtained; in all, \$166,000.

Tampa and Hillsboro Bays, Saint Petersburg Harbor, Hillsboro, and Manatee Rivers, Florida: For maintenance, \$66,500; for improvement of Hillsboro Bay in accordance with the report submitted in House Document Numbered Thirteen hundred and forty-five, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$300,000; in all, \$366,500: *Provided*, That nothing in this Act, nor in the Act approved June twenty-fifth, nineteen hundred and ten, entitled "An Act making appropriations for the construction, repair and preservation of certain public works on rivers and harbors, and for other purposes," shall be so construed as to prevent the use of any part of the Ybor Estuary zone for industrial or other legitimate purposes when the same is not needed for commercial uses, nor to exclude the building and operation of a railroad or railroads by private parties or railroad companies under such rules and regulations as the Secretary of War may prescribe, subject to the right of the city of Tampa to construct and operate a municipal railroad on said estuary zone as set forth in said report. The Secretary of War is hereby authorized to prosecute the work of improvement on the existing project for Saint Petersburg Harbor, in accordance with the modified conditions recommended by the Chief of Engineers and the Board of Engineers for Rivers and Harbors in the report printed in Rivers and Harbors Committee Document Numbered Six, Sixty-fourth Congress, second session.

Saint Johns River, Florida, Jacksonville to the ocean, opposite the city of Jacksonville, Jacksonville to Palatka, and Palatka to Lake Harney, Lake Crescent and Dunns Creek, and Oklawaha River, Florida: For maintenance, \$335,000.

Kissimmee, Caloosahatchee, Orange, Anclote, Crystal, Withlacoochee, and Suwannee Rivers, Charlotte Harbor, Sarasota Bay, and Clearwater Harbor and Boca Ceiga Bay, Florida: For maintenance, \$11,000.

Removing the water hyacinth, Florida: For the removal of the water hyacinth from the navigable waters in the State of Florida, in so far as it is or may become an obstruction to navigation, \$10,000.

Carrabelle Bar and Harbor, Apalachicola, Saint Joseph, and Saint Andrews Bays, Apalachicola and Chipola Rivers, and channel from Apalachicola River to Saint Andrews Bay, Florida, Flint River, Georgia, and Chattahoochee River, Georgia and Alabama: For maintenance, \$77,500; continuing improvement of Apalachicola River, including the cut-off, Lee Slough, lower Chipola River, and upper Chipola River from Marianna to its mouth, \$18,000; in all, \$95,500.

Holmes and Blackwater Rivers, Florida, Choctawhatchee, Escambia, and Conecuh Rivers, Florida and Alabama, the narrows in Santa Rosa Sound, and Pensacola Harbor, Florida: For maintenance, \$9,500.

Mobile Harbor and Bar, and channel connecting Mobile Bay and Mississippi Sound, Alabama: For maintenance of channel connecting Mobile Bay and Mississippi Sound, \$5,000; for maintenance of Mobile Harbor and Bar and for improvement in accordance with the report submitted in House Document Numbered Seventeen hundred and sixty-three, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, except as to pilotage and terminal facilities, \$110,000; in all, \$115,000.

Alabama River, Alabama, and Coosa River, Alabama and Georgia: Continuing improvement and for maintenance, including the Alabama and Coosa Rivers between Montgomery and Wetumpka, \$50,000.

Tombigbee River, Alabama and Mississippi: For maintenance from mouth to Demopolis, Alabama, \$30,000, and from Demopolis, Alabama, to Walkers Bridge, Mississippi, \$10,000; in all, \$40,000.

Pascagoula Harbor, Mississippi: Continuing improvement and for maintenance of channels through Horn Island Pass, Mississippi Sound, Pascagoula River, and Dog River, \$113,000.

Gulfport Harbor, Mississippi: Continuing improvement and for maintenance of anchorage basin at Gulfport and channel therefrom to the anchorage or roadstead at Ship Island, and for the improvement and maintenance of channel at Ship Island Pass, \$80,000.

Pascagoula, Wolf, Jordan, Pearl, and East Pearl Rivers, and Biloxi Harbor, Mississippi: For maintenance, \$10,000.

Yazoo River and tributaries, Mississippi: For maintenance, including Yazoo, Tallahatchie, Coldwater, and Big Sunflower Rivers, Tchula Lake, Steele, and Washington Bayous, Lake Washington, and Bear Creek, \$20,000.

Passes at the mouth of the Mississippi River: Continuing improvement and for maintenance, \$1,825,000.

Bayous Lafourche, Terrebonne, Grossetete, Plaquemine, and Teche, Louisiana: For maintenance, including Grand River and Pigeon Bayous, \$64,000.

Waterway from the Mississippi River to the Sabine River, Louisiana: For maintenance, \$7,000; for completing improvement from Mermentau River to Sabine River, Louisiana and Texas, in accordance with the report submitted in Senate Document Numbered Seven hundred and five, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$230,000; in all, \$237,000.

Lake Ponchartrain, Pass Manchac, Bogue Falia, Chefuncte, Ponchatoula, Natalbany, Blood, Tickfaw, and Amite Rivers, and Bayou Manchac, Louisiana: For maintenance, \$4,000; for completing improvement of Lake Ponchartrain in accordance with the report submitted in House Document Numbered One hundred and seventy-six, Sixty-third Congress, first session, \$32,000; in all, \$36,000.

Bayous Vermilion, Nezpique, des Cannes, Plaquemine Brule, and Queue de Tortue, Mermentau River, and Calcasieu River and Pass, Louisiana: Continuing improvement and for maintenance, including channel, bay, and passes of Bayou Vermilion, and tributaries of Mermentau River, \$51,000.

Removing the water hyacinths, Alabama, Mississippi, Louisiana, and Texas: For the removal of the water hyacinth from the navigable waters in the States named in so far as it is or may become an obstruction to navigation, \$20,000.

Atchafalaya River, Louisiana: For maintenance, \$20,000.

Harbor at Sabine Pass and Port Arthur Canal, Sabine-Neches Canal, and Johnsons Bayou, Louisiana and Texas: For maintenance, \$110,000; continuing improvement of Sabine Pass and Port Arthur Canal, \$300,000; in all, \$410,000.

Red and Sulphur Rivers, Arkansas and Texas, and Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana: For maintenance, \$5,000.

Galveston Harbor, Galveston Channel, Port Bolivar Channel, Texas City Channel, and Houston Ship Channel, Texas: For maintenance, \$480,000.

Port Aransas, Texas: Continuing improvement and for maintenance, \$100,000.

Anahuac Channel, mouth of Trinity River, Oyster, and Clear Creeks, and Cedar, Chocolate, Turtle, Bastrop, Dickinson, Double, and East Bay Bayous, Texas: For maintenance, \$33,300.

Waterway from Galveston to Corpus Christi, and channel from Pass Cavallo to Port Lavaca, Texas: For maintenance, \$90,000.

Freeport Harbor, Texas: For maintenance of mouth of Brazos River, \$66,000; for improvement in accordance with the report submitted in House Document Numbered Fourteen hundred and sixty-nine, Sixty-third Congress, third session, and subject to the conditions set forth in said document, \$150,000; in all, \$216,000.

Red, Black, Ouachita, Tensas, Boeuf, and Saline Rivers, and Bayous Macon, Bartholomew, D'Arbonne, and Corney, Arkansas and Louisiana: For maintenance, \$65,000. The balance of appropriations heretofore made for the construction of Lock and Dam Numbered Seven, Ouachita River, Arkansas and Louisiana, is hereby made available, in the discretion of the Secretary of War, for the construction of Lock and Dam Numbered Five.

Arkansas River, Arkansas and Oklahoma: For maintenance by snagging operations, \$35,000.

Black and Current Rivers, Arkansas and Missouri; White, Saint Francis, and L'Anguille Rivers, and Blackfish Bayou, Arkansas: For maintenance, \$28,700.

Cumberland River, Tennessee and Kentucky: For maintenance above Nashville, \$5,000; continuing improvement below Nashville, \$632,000; in all, \$637,000.

Tennessee River, Tennessee, Alabama, and Kentucky. For maintenance and continuing improvement, \$401,000.

Toledo, Port Clinton, Sandusky, Huron, Vermilion, Lorain, Cleveland, Fairport, Ashtabula, and Conneaut Harbors, Ohio: For maintenance, \$132,000; completing improvement of Lorain Harbor in accordance with the report submitted in House Document Numbered Nine hundred and eighty, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$16,500; for completing improvement of Lorain Harbor in accordance with House Document Numbered Nine hundred and eighty-five, Sixty-fourth Congress, first session, \$63,150; for improvement of Cuyahoga River, Cleveland Harbor, in accordance with the report submitted in House Document Numbered Seven hundred and seven, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$5,000: *Provided*, That the Government's share in the cost of the improvement in accordance with the final plans adopted shall not exceed \$400,000; in all, \$216,650. The unexpended balances of appropriations heretofore made and authorized for the improvement of Conneaut Harbor, Ohio, are hereby made available for completing improvement in accordance with the report submitted in House Document Numbered Nine hundred and eighty-three, Sixty-fourth Congress, first session.

Ohio River: Continuing improvement by the construction of locks and dams with a view to securing a navigable depth of nine feet,

\$5,000,000. Upon the recommendation of the Chief of Engineers and the approval of the Secretary of War the project for the improvement of the Ohio River may be so modified as to permit the construction of one lock and fixed dam to replace Locks and Dams Numbered One and Two, should such modification be deemed desirable and advantageous.

Grand Marais, Marquette, Marquette Bay, and Ontonagon Harbors, and Keweenaw Waterway, Michigan; Ashland and Port Wing Harbors, Wisconsin; Duluth-Superior Harbor, Minnesota and Wisconsin; Agate Bay and Grand Marais Harbors, Minnesota: For maintenance, \$175,000; completing improvement of Ashland Harbor in accordance with the modified plans in the report submitted in House Document Numbered Sixteen hundred and ninety-eight, Sixty-fourth Congress, second session, \$10,000; in all, \$185,000.

Saint Joseph Harbor and River, Saugatuck Harbor and Kalamazoo River, South Haven, Holland, Grand Haven, Muskegon, White Lake, Ludington, Manistee, Portage Lake, Arcadia, Frankfort, Charlevoix, and Petoskey Harbors, and Grand River, Michigan: For maintenance, \$112,050; continuing improvement of Manistee Harbor, \$28,700; in all, \$140,750.

Mackinac, Cheboygan, Rogers City, Alpena, Harbor Beach, and Monroe Harbors, Saginaw, Black, Clinton, and Rouge Rivers, Michigan: For maintenance, \$13,500; for improvement of Harbor Beach Harbor in accordance with the report submitted in House Document Numbered Seventeen hundred, Sixty-fourth Congress, second session, \$100,000; for improvement of Rouge River, Michigan, in accordance with the report submitted in House Document Numbered Two thousand and sixty-three, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$490,000: *Provided*, That the Secretary of War may, in his discretion, substitute plan B for plan A; in all, \$603,500.

Ship channel connecting waters of the Great Lakes between Chicago, Duluth, and Buffalo, including Saint Marys River, Saint Clair River, channels in Lake Saint Clair, and Detroit River, Michigan: For maintenance, \$185,000.

Manistique Harbor, Michigan, Menominee, Oconto, Green Bay, Algoma, Kewaunee, Two Rivers, Manitowoc, Sheboygan, Port Washington, Milwaukee, Racine, Kenosha, and Waukegan Harbors, Sturgeon Bay and Lake Michigan Ship Canal, and Fox River, Wisconsin: For maintenance, \$52,100: *Provided*, That this amount is hereby made available for maintenance of the channel to the established depth of the Milwaukee, Menominee, and Kinnikinnic Rivers, Inner Harbor, Milwaukee, Wisconsin. The project for the improvement of Green Bay Harbor, Wisconsin, is hereby modified to include the maintenance of the turning basin at Depere in accordance with the report submitted in House Document Numbered One thousand and seventeen, Sixty-fourth Congress, first session.

Saint Croix River, Wisconsin and Minnesota, Minnesota River, Minnesota, Lake Traverse, Minnesota and South Dakota, Red River of the North, Minnesota and North Dakota, Warroad Harbor and River, Zippel Bay, and Lake of the Woods, Minnesota: For maintenance, \$3,000.

Chicago and Calumet Harbors, Chicago and Illinois Rivers, Illinois, Calumet River, Illinois and Indiana, Indiana and Michigan

City Harbors, Indiana: For maintenance, \$115,000; completing improvement of Indiana Harbor, \$395,200; in all, \$510,200.

Mississippi River from the mouth of the Ohio River to and including the mouth of the Missouri River: Continuing improvement and for maintenance, \$350,000.

The Mississippi River Commission shall forthwith make an examination of the Memphis Harbor, on the Mississippi River at the mouth of Wolf River, and at the earliest practicable moment make such plans and take such steps, to be approved by the Chief of Engineers, as will remove the large sand bar in front of Memphis to such an extent as may be necessary in the interest of navigation at that point, such improvements to be paid out of any funds heretofore or hereafter appropriated for the work of the Mississippi River Commission, not to exceed, however, the sum of \$250,000 for the current fiscal year.

Mississippi River from the mouth of the Missouri River to Minneapolis, Minnesota: Continuing improvement and for maintenance, \$1,200,000.

Mississippi River between Saint Paul and Minneapolis, and between Brainerd and Grand Rapids, Mississippi and Leech Rivers, and reservoirs at headwaters of Mississippi River: For maintenance, \$2,000; continuing improvement of Mississippi and Leech Rivers, \$50,000; in all, \$52,000.

Osage and Gasconade Rivers, Missouri, and Kansas River, Kansas: Continuing improvement and for maintenance of Osage and Gasconade Rivers, \$20,000; completing improvement of Kansas River in accordance with the report submitted in House Document Numbered Five hundred and eighty-four, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$10,000; in all, \$30,000.

Missouri River: For maintenance and continuing improvement with a view to securing a permanent six-foot channel between Kansas City, Kansas, from the upper end of Quindaro Bend, and the mouth of the river, \$1,000,000; for snagging and maintenance between Kansas City and Sioux City, \$35,000; for maintenance between Sioux City and Fort Benton, \$50,000; in all, \$1,085,000.

Provided, That there shall be expended, out of the \$1,000,000 above appropriated, as soon as practicable, and, if possible, before June first, nineteen hundred and eighteen, \$25,000, or so much thereof as may be necessary, subject to such terms of local cooperation as the Secretary of War may prescribe, not to exceed one-half the cost of the improvement, at Cambridge Bend, near Glasgow, Missouri, from the head of said bend to Bowlers Point, in constructing all necessary new works and in putting in thorough repair existing works, so that the same shall effectively protect the banks and confine the river to its channel at and along said bend: *And provided further*, That the Secretary of War is hereby authorized to transfer to the Missouri River for work thereon, free of cost, two dredges not necessarily employed elsewhere.

San Diego Harbor, California: For maintenance, \$20,000; completing improvement of San Diego Harbor in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session, and by dredging area "A"

in accordance with the project submitted on page fourteen of House Document Numbered Six hundred and forty-eight, Sixty-fourth Congress, first session, as modified in the report printed in Rivers and Harbors Committee Document Numbered Eight, Sixty-fourth Congress, second session, \$154,000; in all, \$174,000.

Los Angeles Harbor, California: For maintenance, \$25,000; and for improvement in accordance with the report submitted in House Document Numbered Eight hundred and ninety-six, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$50,000: *Provided*, That no expense shall be incurred by the United States for acquiring any lands required for the purpose of this improvement; in all, \$75,000. Such modification as may be recommended by the Chief of Engineers and approved by the Secretary of War for the plan of silt-diversion works adopted by the river and harbor Act approved July twenty-seventh, nineteen hundred and sixteen, for the protection of Los Angeles and Long Beach Harbors, in accordance with the report printed in House Document Numbered Four hundred and sixty-two, Sixty-fourth Congress, first session, is hereby authorized, subject to the conditions set forth in said document: *Provided*, That such modifications shall not increase the total cost of the work to the United States.

San Francisco, Oakland, Richmond, Monterey, and Humboldt Harbors, Redwood, and Petaluma Creeks, Napa River, San Pablo Bay, Mare Island Strait, and Suisun Channel, California: For maintenance, \$287,500; continuing improvement of Oakland Harbor, \$92,000: *Provided*, That if in the judgment of the Secretary of War the prices received in response to advertisements for bids for dredging are not reasonable, so much of the amount herein appropriated as shall be necessary may be expended for the purchase or construction of a suitable dredging plant; for improvement of Richmond Harbor in accordance with the report submitted in House Document Numbered Five hundred and fifteen, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$100,000; continuing improvement of Humboldt Harbor and Bay, \$190,500; for improvement of San Pablo Bay and Mare Island Strait in accordance with the report submitted in House Document Numbered One hundred and forty, Sixty-fifth Congress, first session, if required for naval needs, \$330,000; in all, \$1,000,000.

Sacramento, Feather, San Joaquin, and Mokelumne Rivers, and Stockton and Mormon Channels (diverting canal), California: For maintenance, \$31,000.

Coquille, Coos, Siuslaw, and Yaquina Rivers, and Coos, Tillamook, and Nehalem Bays, Oregon: For maintenance, \$34,000; continuing improvement of channel over the bar at Coos Bay, \$70,000; in all, \$104,000.

Cascades and Dalles-Celilo Canals, Oregon, Columbia River and tributaries above Celilo Falls to the mouth of Snake River, Oregon and Washington, and Snake River, Oregon, Washington, and Idaho: Continuing improvement and for maintenance, \$70,000.

Willamette River above Portland and at Willamette Falls, Yamhill and Clatskanie Rivers, Oregon, Cowlitz, Lewis, and Grays Rivers, Washington: For maintenance, \$48,300; completing improvement of Willamette River around the Willamette Falls at Oregon City, Ore-

gon, in accordance with the report submitted in House Document Numbered One thousand and sixty, Sixty-second Congress, third session, \$80,000; continuing improvement of Lewis River, including North and East Forks, \$13,500; in all, \$141,800.

Columbia and lower Willamette Rivers below Vancouver, Washington, and Portland, Oregon, and mouth of Columbia River, Oregon and Washington: Continuing improvement and for maintenance, in accordance with report submitted in Senate Document Numbered Fifty-seven, Sixty-fifth Congress, first session, \$310,000: *Provided*, That of the funds herein appropriated \$6,000, or so much thereof as may be necessary, may be expended in completing improvement at Cathlamet, Washington, in accordance with the report submitted in House Document Numbered One hundred and twenty, Sixty-third Congress, first session.

Willapa River and Harbor, Grays Harbor, Chehalis and Hoquiam Rivers, Washington: For maintenance, \$7,500; for improvement of Grays Harbor in accordance with the report submitted in House Document Numbered Seventeen hundred and twenty-nine, Sixty-fourth Congress, second session, \$85,000: *Provided*, That pending the construction of the new dredge authorized any other Government dredge that may be available may be used for the deepening and maintenance of the bar channel; in all, \$92,500.

Puget Sound and its tributary waters, Olympia, Tacoma, and Bellingham Harbors, Lake Washington Ship Canal, Snohomish and Skagit Rivers, Swinomish Slough, waterway connecting Port Townsend Bay and Oak Bay, Columbia River between Wenatchee and Kettle Falls, Washington: For maintenance, \$30,000; for improvement of Lake Washington Ship Canal in accordance with the report submitted in House Document Numbered Eight hundred, Sixty-fourth Congress, first session, \$200,000; in all, \$230,000.

Nome Harbor and Apoon mouth of Yukon River, Alaska: Completing improvement of Apoon mouth of Yukon River in accordance with the report submitted in House Document Numbered Nine hundred and ninety-one, Sixty-third Congress, first session, \$45,000; completing improvement of Nome Harbor in accordance with the report submitted in House Document Numbered Nineteen hundred and thirty-two, Sixty-fourth Congress, second session, and subject to the conditions set forth in said document, \$105,000; in all, \$150,000.

Honolulu, Kahului, and Hilo Harbors, Hawaii: For maintenance \$10,000; for improvement of Honolulu Harbor in accordance with the report submitted in House Document Numbered Three hundred and ninety-two, Sixty-fourth Congress, first session, \$50,000; and the unexpended balances of appropriations heretofore made and authorized for the improvement of Honolulu Harbor, Hawaii, are hereby made available for improvement in accordance with the above-mentioned report: *Provided*, That if in the judgment of the Secretary of War the prices received in response to advertisement for bids for dredging are not reasonable, so much of the amount herein appropriated and authorized as shall be necessary may be expended for the purchase or construction of a suitable dredging plant; continuing improvement of Hilo Harbor, \$150,000; in all, \$210,000.

San Juan Harbor, Porto Rico: For maintenance, \$10,000; for improvement in cooperation with the local government in accordance with the report submitted in House Document Numbered

Eight hundred and sixty-five, Sixty-third Congress, second session, \$400,000; in all, \$410,000: *Provided*, That until \$600,000 of the amount expended on the dredging and reclamation work authorized herein is reimbursed, the Government of Porto Rico shall on the first day of July of each year after the completion of the work pay to the Government of the United States \$50,000.

SEC. 2. Where separate works or items are consolidated herein and an aggregate amount is appropriated therefor, the amount so appropriated shall, unless otherwise expressed, be expended in securing the maintenance and improvement according to the respective projects adopted by Congress after giving due regard to the respective needs of traffic. The allotments to the respective works so consolidated shall be made by the Chief of Engineers as authorized by the Secretary of War. In case such works or items are consolidated and separate amounts are given to individual projects, the amounts so named shall be expended upon such separate projects unless, in the discretion of the Chief of Engineers and the Secretary of War, another allotment or division should be made of the same. Any balances remaining to the credit of the consolidated items shall be carried to the credit of the respective aggregate amounts appropriated for the consolidated items.

SEC. 3. That in all cases where the authorized project for a work of river or harbor improvement provides for the construction or use of Government dredging plant, the Secretary of War may, in his discretion, have the work done by contract if reasonable prices can be obtained.

SEC. 4. That for examinations, surveys, and contingencies for rivers and harbors for which there may be no special appropriation, the sum of \$200,000 is hereby appropriated; *Provided*, That no preliminary examination, survey, project, or estimate for new works other than those designated in this or some prior Act or joint resolution shall be made: *Provided further*, That after the regular or formal reports made as required by law on any examination, survey, project, or work under way or proposed are submitted no supplemental or additional report or estimate shall be made unless ordered by a concurrent resolution of Congress: *And provided further*, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or harbor mentioned in this Act until funds for the commencement of the proposed work shall have been actually appropriated by law.

The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following-named localities, and a sufficient sum to pay the cost thereof may be allotted from the amount provided in this section:

Harbor at Corea, Maine.

Waterway connecting Buzzards Bay and Cape Cod Bay, Massachusetts: The Secretary of War, the Secretary of the Navy, and the Secretary of Commerce are hereby authorized to examine and appraise the value of the works and franchises of the Cape Cod Canal, Massachusetts, connecting Buzzards and Cape Cod Bays, with reference to the advisability of the purchase of said canal by the United States and the construction over the route of the said canal of a free waterway, with or without a guard lock, and having a depth and capacity sufficient to accommodate the navigation interests that are

affected thereby. This investigation shall be conducted under the direction of the Secretary of War and the supervision of the Chief of Engineers in the usual manner provided by law for making preliminary examinations and surveys except that the Secretary of War shall call upon the Secretary of the Navy and the Secretary of Commerce for such data and evidence as these Secretaries may wish to have incorporated in the report of survey, and further, that the final report of the investigation, with its conclusions upon probable cost and commercial advantages, and military and naval uses of the said canal, shall be submitted to the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce for their action before it is transmitted to Congress.

If the said Secretaries are all in favor of the acquisition of the said canal, the Secretary of War is hereby further authorized to enter into negotiations for its purchase, including all property, franchises, and appurtenances used or acquired for use in connection therewith or appertaining thereto; and he is further authorized, if in the judgment of the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce, that the price for such canal is reasonable and satisfactory, to make contracts for the purchase of the same, at the option of the United States, subject to future ratification and appropriation by the Congress; or, in the event of the inability of the Secretary of War to make a satisfactory contract for the voluntary purchase of said Cape Cod Canal and its appurtenances, he is hereby authorized and directed, through the Attorney General, to institute and carry to completion proceedings for the condemnation of said canal and its appurtenances, the acceptance of the award in said proceedings to be subject to the future ratification and appropriation by Congress. Such condemnation proceedings shall be instituted and conducted in, and jurisdiction of said proceedings is hereby given to, the district court of the United States for the district of Massachusetts, substantially as provided in "An Act to authorize condemnation of land for sites for public buildings, and for other purposes," approved August first, eighteen hundred and eighty-eight; and the sum of \$5,000 is hereby appropriated to pay the necessary costs thereof and expenses in connection therewith. The Secretary of War is further authorized and directed to report the proceedings hereunder to Congress.

Providence Harbor, Rhode Island.

Pawtucket River, Rhode Island, with a view to increasing the width of channel through the ledge near Pawtucket.

Sterling Basin, at Greenport, New York, with a view to securing adequate width and depth.

The item for preliminary examination of Jamaica Bay with a view to obtaining a channel one hundred feet wide and six feet deep to and through Great South Bay to Peconic Bay, including channels to Parsonage and Sumpawans River and Freeport and Massapequa Creeks, in the river and harbor Act approved March second, nineteen hundred and seven, is modified to permit the consideration of a channel of suitable depth and width.

Flushing Bay, New York.

The Kill van Kull from Shooters Island west to junction of channels with a view to dredging shoals between channels to provide anchorage grounds.

Bay Ridge Channel, New York Harbor, New York.

Harlem River, New York.

New York Harbor: West side of upper bay from Constable Hook to Ellis Island.

Gardiners Island, New York, with a view to the construction of a breakwater.

Youghiogheny River, Pennsylvania, from its mouth to West Newton, including a report on existing and prospective water terminals.

Harbor at Poplar Island, Maryland.

Northwest River, Virginia-North Carolina: From at or near Woodward's Bridge upstream so flat lighters, and so forth, may ascend, with a width of channel of not less than forty feet, as far as the Cornland Causeway Road, or beyond that point as far as practicable, and to take into consideration any proposition for the cooperation on the part of local or State interests, for the payment of one-half the expense of this project, and to report the possible utility of the whole river, from its mouth to its source, if adequately improved to meet the requirements of its connecting waters, for the national defense.

Trent River, North Carolina, with a view to deepening the channel along that portion of the river known as Foy's Flats, and creating a turning basin at the confluence of Mill Creek and Trent River.

Harbor of Silver Lake, Ocracoke Island, and entrance thereto from Pamlico Sound, North Carolina.

Smiths Creek, Pamlico County, North Carolina.

Broad Creek, Pamlico County, North Carolina.

Queens Creek, Onslow County, North Carolina.

Northeast River, Duplin County, North Carolina.

Little River, North Carolina and South Carolina.

Lynchs River, South Carolina.

Broad and Congaree Rivers, at or near Columbia, South Carolina, with a view to improvement for navigation, consideration being given to any proposition of local cooperation.

Charleston Harbor and Cooper River, South Carolina, from the entrance to Sanders Creek, including Town Creek Channel.

Church and Bohicket Creeks and Church Flats, South Carolina, from the North Edisto River to the Stono River.

Ashley River, South Carolina, from the Standard Wharf of the Virginia-Carolina Chemical Company to Lambs, with a view of improving the channel to a depth of not less than eight feet.

For the construction of a navigable waterway, of suitable depth and width to answer the needs of commerce, connecting the waters of the Flint and Ocmulgee Rivers in the State of Georgia.

Savannah River at and near Augusta, Georgia, for the purpose of determining what erosion is taking place and what improvements are necessary to prevent the same in the interest of navigation; also the consideration of any proposition for cooperation on the part of local or State interests.

Canaveral Harbor, Florida.

Banana Creek, Florida.

Indian and Halifax Rivers, Florida.

Little Sarasota Bay, Florida, from Sarasota Bay to Venice.

Miami Harbor (Biscayne Bay), Florida.

Withlacoochee River, Florida, between Dunnellon and Lake Panasoffkee.

Lake Worth Inlet, Palm Beach County, Florida.

Charlotte Harbor, Florida, with a view to securing a channel of increased depth from the Gulf of Mexico to the town of Boca Grande.

Pithlachascotee River, Florida.

Peace River, Florida.

Braden River, Manatee County, Florida.

Hillsboro River, Florida, from Michigan Avenue to Lafayette Street Bridge, Tampa.

Back Bay of Biloxi, Mississippi, with a view to removing shoals at Cranes Neck and Biloxi Mud Flats and securing a depth of twelve feet.

Bayou Tigre, Louisiana.

Atchafalaya River and Bayous Courtableau, Teche, and Vermilion, with a view to forming navigable connections between said streams, including consideration of any propositions for cooperation on the part of local interests.

Bayou Dorcheat, Louisiana, through Lake Bistaneau and Loggy Bayou.

Bayou Terrebonne, Louisiana, between Houma and Thibodaux.

Bayou Lacassine, Louisiana.

Bayou Chene, Louisiana.

Shallow Bayou, Louisiana.

Intracoastal waterway from Calcasieu River, Louisiana, to Sabine River, Texas and Louisiana, with a view to securing such width and depth as will meet the demands of commerce.

Calcasieu River from the Gulf of Mexico to the city of Lake Charles, Louisiana, with a view to providing greater depth of water.

Old River, Chambers County, Texas.

Galveston Bay at Smiths Point, Texas.

Channel from Aransas Pass to Corpus Christi, Texas.

Waterway in Texas from the jetties at Sabine Pass through the Port Arthur Ship Channel to Port Arthur and through the Sabine-Neches Canal to the mouths of the Neches and Sabine Rivers, and thence up said rivers to Beaumont and Orange, respectively, and also through Taylors Bayou from the Government turning basin to the Southern Pacific Railway Bridge, with a view to deepening and widening such waterways, making necessary cut-offs, and otherwise improving same for navigation and commerce.

Black River, Arkansas and Missouri.

Black River, Arkansas and Missouri, above Black Rock, Arkansas, an instrumental survey with a view to preparing plans and estimates of cost for caring for flood waters in said river and to determining whether a portion of the flood waters of the Saint Francois River should be diverted to the Black River, and what additional cost such diversion would involve in connection with the works on the Black River. The report of survey shall also include consideration of any proposition by local interests for participation in the expense of said project on account of the reclamation of contiguous lands or other lands subject to overflow by said streams.

The Secretary of War is hereby authorized and directed to appoint a board of engineers to make a survey of Galveston Island and Galveston Channel, Texas, east of the causeway, and to prepare plans and estimates for their protection against storms and erosions, includ-

ing the protection of the instrumentalities and aids to commerce located there.

Channel connecting the Houston Ship Channel with the Goose Creek oil field, Harris County, Texas.

Tennessee River, Tennessee, with a view to locating one low dam at mouth of Whites Creek and one low dam at the mouth of the Clinch River.

Little Tennessee River, Tennessee.

Black River at Lorain, Ohio.

New Buffalo Harbor, Michigan.

Pentwater Harbor, Michigan.

Kenosha Harbor, Wisconsin.

Bar in Lake Michigan in front of the United States naval training station, Great Lakes, Illinois, with a view to dredging said bar so as to permit lake vessels to land at said station.

The Secretary of War is authorized to make such preliminary examinations as can be made from available data, without making field surveys, touching the creation of conditions in or paralleling the Saint Lawrence River from Lake Ontario to the Canadian border suitable in all respects for navigation by ocean-going ships, including such approximate estimate of cost of improvement as can be predicated on such available data and an approximation of the amount of power, if any, that would be incident thereto.

Missouri River between Yankton and Vermilion, South Dakota.

Los Angeles Harbor, California, with a view to dredging a channel of adequate width and depth in the West Basin.

Harbor at Newport, California.

Sacramento River, California, from the city of Sacramento to the city of Colusa, with a view to providing a channel six feet in depth.

Petaluma Creek, California.

Haydens Slough, Columbia River, near Portland, Oregon, with a view to the relocation of the dike near upper end.

The Secretary of War is directed to make a survey and submit a report to Congress with a view to securing a channel thirty-five feet deep in the Lower Columbia and Willamette Rivers below Portland, Oregon.

Main ship channel in or near the mouth of the Columbia River on the southerly or Oregon side from a point in the vicinity of Point Adams along channel to or a short distance above Tongue Point, and of Youngs Bay from the Columbia River channel to a point one mile above the county bridge, so as to give a depth of forty feet at low tide.

The Secretary of War is directed to make a survey and submit a report to Congress upon the advisability of securing a channel in the Columbia River from the mouth of the Willamette River to the eastern limits of the city of Vancouver, Washington, equal in width and depth to the project channel from the mouth of the Willamette to the city of Portland, Oregon, and what cooperation, if any, should be given.

Columbia River between Carrolls, Washington, and Stella, Washington, and the Cowlitz River below Ostrander, Washington, with a view to devising plans for bank protection, including consideration

of any proposition for cooperation on the part of local or State interests.

Willamette Slough, Oregon, with a view to removing old dikes and breakwaters now obstructing navigation.

East Channel, Coos River, Oregon.

Tillamook Bay and River and Hoquarten Slough, Oregon, with a view to securing the most feasible channel from the entrance to the city of Tillamook.

Black River and Renton Harbor, Washington.

Mouth of the Cowlitz River, Washington, for the purpose of determining the advisability of the construction of a jetty, or other means, for deepening the channel at the mouth of the river.

Waterway between Port Townsend Bay and Oak Bay in Jefferson County, Washington, with a view to increased width and depth.

Controller Bay, Alaska.

Provided, That no survey herein provided for shall be made until after the close of the war with Germany except such as the Secretary of War shall direct.

SEC. 5. That Congress hereby consents that the States of Minnesota, North Dakota, and South Dakota, or any two of them, may enter into any agreement or agreements with each other to aid in improving navigation and to prevent and control floods on boundary waters of said States and the waters tributary thereto. And said States, or any two of them, may agree with each other upon any project or projects for the purpose of making such improvements, and upon the amount of money to be contributed by each to carry out such projects. The Secretary of War is authorized and directed to make a survey of any project proposed, as aforesaid, by said States, or any two of them, to determine the feasibility and practicability thereof and the expenses of carrying the same into effect and what share of such expenses should be borne by the respective States, local interests, or by the National Government. If the Secretary of War approves any such projects, he may authorize the States to make such improvements at their own expense, but under his supervision. That the sum of \$25,000, or so much thereof as may be necessary, is hereby appropriated, out of any funds in the Treasury of the United States not otherwise appropriated, for the purpose of enabling the Secretary of War to make the surveys and estimates herein contemplated.

SEC. 6. That no part of the funds herein appropriated shall be used to pay for any work done by private contract if the contract price is more than twenty-five per centum in excess of the estimated cost of doing the work by Government plant.

SEC. 7. That section four of the river and harbor Act of August eighteenth, eighteen hundred and ninety-four, as amended by section eleven of the river and harbor Act of June thirteenth, nineteen hundred and two, be, and is hereby, amended so as to read as follows:

"SEC. 4. That it shall be the duty of the Secretary of War to prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other

executive department. Such regulations shall be posted, in conspicuous and appropriate places, for the information of the public; and every person and every corporation which shall violate such regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding \$500, or by imprisonment (in the case of a natural person) not exceeding six months, in the discretion of the court."

SEC. 8. That, in the interest of the national defense and for the better protection of life and property on said waters, the Secretary of War is hereby authorized and empowered to prescribe such regulations as he may deem best for the use and navigation of any portion of areas of the navigable waters of the United States or waters under the jurisdiction of the United States endangered or likely to be endangered by Coast Artillery fire in target practice or otherwise, or by the proving operations of the Government ordnance proving ground at Sandy Hook, New Jersey, or at any Government ordnance proving ground that may be established elsewhere on or near such waters, and of any portion or area of said waters occupied by submarine mines, mine fields, submarine cables, or other material and accessories pertaining to seacoast fortifications; and the said Secretary of War shall have like power to regulate the transportation of explosives upon any of said waters.

That to enforce the regulations prescribed pursuant to this section the Secretary of War may detail any public vessel in the service of the War Department, or, upon the request of the Secretary of War, the head of any other department may enforce, and the head of any such department is hereby authorized to enforce, such regulations by means of any public vessel of such department.

SEC. 9. That whenever any State, or any reclamation, flood control or drainage district, or other public agency created by any State, shall undertake to secure any land or easement therein, needed in connection with a work of river and harbor improvement duly authorized by Congress, for the purpose of conveying the same to the United States free of cost, and shall be unable for any reason to obtain the same by purchase and acquire a valid title thereto, the Secretary of War may, in his discretion, cause proceedings to be instituted in the name of the United States for the acquirement by condemnation of said land or easement, and it shall be the duty of the Attorney General of the United States to institute and conduct such proceedings upon the request of the Secretary of War: *Provided*, That all expenses of said proceedings and any award that may be made thereunder shall be paid by such State, or reclamation, flood control or drainage district, or other public agency as aforesaid, to secure which payment the Secretary of War may require such State, or reclamation, flood control or drainage district, or other public agency as aforesaid, to execute a proper bond in such amount as he may deem necessary before said proceedings are commenced.

SEC. 10. That section four of the river and harbor Act of July twenty-seventh, nineteen hundred and sixteen, be, and is hereby, amended so as to read as follows:

"SEC. 4. That there shall be printed one thousand five hundred copies of an index to the annual reports of the Chief of Engineers.

United States Army, from nineteen hundred and thirteen to nineteen hundred and seventeen, inclusive, which shall be supplemental to the index published in House Document Numbered Seven hundred and forty, Sixty-third Congress, second session, covering the period from eighteen hundred and sixty-six to nineteen hundred and twelve, inclusive, authorized by section six of the river and harbor Act approved July twenty-fifth, nineteen hundred and twelve, and shall also include an index of congressional documents relating to works of river and harbor improvement which have not been published in the annual reports of the Chief of Engineers, and an index of such other professional papers relating to the work of the Engineer Department as the Chief of Engineers may select for this purpose."

SEC. 11. The Secretary of War is hereby directed to report without delay to Congress the survey provided for by the river and harbor Act of nineteen hundred and thirteen relative to the encroachments and obstructions in the Chicago River and all its branches, together with such encroachments as have been made in and along the lake front between Lincoln Park and the Indiana State line.

SEC. 12. That the Secretary of War is hereby authorized, under such terms, including a reasonable rental, to be approved by him, to permit the Betterton-Morgan Company Inc. to construct a dock or docks upon lots one, two, and three, block six, Seattle tidelands, or upon such portions thereof as he may designate, the construction of said docks to be under the supervision of and all material used therein to be approved by the Secretary of War and the necessary expenses of such supervision and construction to be borne by said company. Said company shall maintain said docks at its own expense and use and maintain the same under such regulations as the Secretary of War may prescribe. Said company shall vacate said docks and remove all its property therefrom upon twenty-four hours' notice to do so from the Secretary of War, and it shall give the Secretary of War satisfactory assurances that upon thirty days' notice to do so it will demolish said docks and remove all debris pertaining thereto as may be required by the Secretary of War. Said docks shall from the time of their construction be the property of the United States and subject to the use of the United States for any purpose whatsoever, and the only interest the said company shall have hereunder is a revocable license to use the same under the terms and conditions set out herein.

SEC. 13. That amounts hereafter paid by private parties or other agencies for rental of plant owned by the Government in connection with the prosecution of river and harbor works shall be deposited in each case to the credit of the appropriation to which the plant belongs.

SEC. 14. That the Atchison, Topeka and Santa Fe Railway Company, of Kansas, a corporation created under and by virtue of the laws of the State of Kansas, be, and it is hereby, granted authority to maintain its wharf, known as "long wharf," in the harbor of San Diego, California, where the same extends across certain submerged lands of the United States, ceded to the United States by act of the Legislature of the State of California, approved March ninth, eighteen hundred and ninety-seven, which said submerged lands lie in front of certain upland property of the United States described as lots one to nineteen of block eighteen of the city of San Diego, upon the following conditions and limitations; That the United States shall have free use of the

so-called "west wharf" of the said railway company, adjoining and connected with the said "long wharf" in the harbor of San Diego, under such rules and regulations as may from time to time be agreed upon between the local representatives of the railway company and the commanding officer of Fort Rosecrans, California: *Provided*, That if, at any time, the said parties shall fail to agree as to said rules and regulations, the United States shall have the occupancy and use of said wharf until the controversy shall have been referred to the general manager of the railway company and the department commander, Western Department, United States Army, for decision, and an agreement shall have been reached by them in the matter, or by one of them and an umpire to be selected by them: *Provided further*, That the United States shall have the right to make such improvements to the said "west wharf" at its own expense as may be necessary to give the United States adequate and reasonable accommodations, provided such improvements shall be made without unnecessary interference with the operation of the railway company in its relations to the public as a common carrier and in its use of the said wharf as such common carrier: *And provided further*, That the railway company shall not be required to add to or alter the said "west wharf" or to add to or alter the warehouse and storeroom accommodations connected therewith. The right to alter, amend, or repeal this section is hereby expressly reserved.

SEC. 15. That Mosquito Creek, in Colleton County, South Carolina, be, and the same is hereby, declared to be a nonnavigable stream within the meaning of the Constitution and laws of the United States.

SEC. 16. That Bayou Meto, in the State of Arkansas, be, and the same is hereby, declared to be a nonnavigable stream within the meaning of the Constitution and laws of the United States.

SEC. 17. That Saint Marys River, Ohio and Indiana, be, and the same hereby is, declared to be a nonnavigable stream within the meaning of the Constitution and laws of the United States.

SEC. 18. That a commission, to be known as the Waterways Commission, consisting of seven members to be appointed by the President of the United States, at least one of whom shall be chosen from the active or retired list of the Engineers Corps of the Army, at least one of whom shall be an expert hydraulic engineer from civil life, and the remaining five of whom may each be selected either from civil life or the public service, is hereby created and authorized, under such rules and regulations as the President may prescribe, and subject to the approval of the heads of the several executive departments concerned, to bring into coordination and cooperation the engineering, scientific, and constructive services, bureaus, boards, and commissions of the several governmental departments of the United States and commissions created by Congress that relate to study, development, or control of waterways and water resources and subjects related thereto, or to the development and regulation of interstate and foreign commerce, with a view to uniting such services in investigating, with respect to all watersheds in the United States, questions relating to the development, improvement, regulation, and control of navigation as a part of interstate and foreign commerce, including therein the related questions of irrigation, drainage, forestry, arid and swamp land reclamation, clarification of streams, regulation of flow, control of floods,

utilization of water power, prevention of soil erosion and waste, storage, and conservation of water for agricultural, industrial, municipal, and domestic uses, cooperation of railways and waterways, and promotion of terminal and transfer facilities, to secure the necessary data, and to formulate and report to Congress, as early as practicable, a comprehensive plan or plans for the development of waterways and the water resources of the United States for the purposes of navigation and for every useful purpose, and recommendations for the modification or discontinuance of any project herein or heretofore adopted. Any member appointed from the retired list shall receive the same pay and allowances as he would if on the active list, and no member selected from the public service shall receive additional compensation for services on said commission, and members selected from civil life shall receive compensation of \$7,500 per annum.

In all matters done, or to be done, under this section relating to any of the subjects, investigations, or questions to be considered hereunder, and in formulating plans, and in the preparation of a report or reports, as herein provided, consideration shall be given to all matters which are to be undertaken, either independently by the United States or by cooperation between the United States and the several States, political subdivisions thereof, municipalities, communities, corporations, and individuals within the jurisdiction, powers, and rights of each, respectively, and with a view to assigning to the United States such portion of such development, promotion, regulation, and control as may be undertaken by the United States, and to the States, political subdivisions thereof, municipalities, communities, corporations, and individuals such portions as belong to their respective jurisdictions, rights, and interests.

The commission is authorized to employ, or retain, and fix the compensation for the services of such engineers, transportation experts, experts in water development and utilization, and constructors of eminence as it may deem necessary to make such investigations and to carry out the purposes of this section. And in order to defray the expenses made necessary by the provisions of this section there is hereby authorized to be appropriated such sums as Congress may hereafter determine, and the sum of \$100,000 is hereby appropriated, available until expended, to be paid out upon warrants drawn on the Secretary of the Treasury by the chairman of said commission.

The commission shall have power to make every expenditure requisite for and incident to its authorized work, and to employ in the District of Columbia and in the field such clerical, legal, engineering, artistic, and expert services as it may deem advisable, including the payment of per diem in lieu of subsistence for employees engaged in field work or traveling on official business, rent of offices in the District of Columbia and in the field, and the purchase of books, maps, and office equipment.

Nothing herein contained shall be construed to delay, prevent, or interfere with the completion of any survey, investigation, project, or work herein or heretofore or hereafter adopted or authorized upon or for the improvement of any of the rivers or harbors of the United States or with legislative action upon reports heretofore or hereafter presented.

Approved, August 8, 1917.

Committee on Rivers and Harbors, House of Representatives, United States.

**MEMORANDA RELATING TO APPROPRIATIONS TO BE INCLUDED
IN RIVER AND HARBOR BILL AS DECIDED UPON BY THE COM-
MITTEE FEB. 20, 1918.**

Project.	Mainte- nance.	Further improve- ment.
Boston (Mass.) district: Boston Harbor, Mass.....	\$40,000	.....
Newport (R. I.) district:		
New Bedford and Fairhaven Harbors, Mass.....	15,000	.....
Pawtucket (Seekonk) River, R. I.....	10,000	.....
New London (Conn.) district:		
Pawcatuck River, R. I. and Conn.....		\$2,500
Connecticut River below Hartford, Conn.....	15,000	.....
New Haven Harbor, Conn.....	14,000	.....
Housatonic River, Conn.....	8,000	.....
First New York (N. Y.) district:		
East River and Hell Gate, N. Y.....		2,200,000
Hudson River Channel, New York Harbor.....		200,000
Narrows of Lake Champlain, N. Y. and Vt.....		200,000
Second New York (N. Y.) district:		
New York Harbor, channel between Staten Island and Hoffman and Swinburne Islands.....		75,000
Newtown Creek, N. Y.....	15,000	.....
Mattituck Harbor, N. Y.....	5,000	.....
Third New York (N. Y.) district:		
Shrewsbury River, N. J.....	10,000	.....
Philadelphia (Pa.) district:		
Delaware River, N. J., Lalor Street, Trenton, to upper railroad bridge.....		150,000
Delaware River, Pa., N. J., and Del., Philadelphia, Pa., to the sea.....	450,000	650,000
Schuylkill River, Pa.....		300,000
Wilmington (Del.) district:		
Absecon Inlet, N. J.....	20,000	.....
Wilmington Harbor, Del.....	50,000	.....
Waterway on the coast of Virginia.....	1,000	.....
Baltimore (Md.) district:		
Baltimore Harbor and Channels, Md.....	100,000	200,000
Wicomico River, Md.....	3,000	.....
Washington (D. C.) district:		
Potomac River at Washington, D. C.....	5,000	.....
Potomac River at Lower Cedar Point, Md.....	3,000	.....
Occoquan (reek, Va.....	3,000	.....
Norfolk (Va.) district:		
Norfolk Harbor and Channels, Va.—		
Norfolk Harbor, Va.....		1,134,000
Thimble Shoal Channel, Va.....		406,000
Appomattox River, Va.....		50,000
Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C.....		500,000
Wilmington (N. C.) district:		
Pamlico and Tar Rivers, N. C.....	9,000	.....
Neuse River, N. C.....	9,000	.....
Contentnea (reek, N. C.....	1,200	.....
Beaufort Harbor, N. C.....	4,000	.....
Waterway connecting Core Sound and Beaufort Harbor, N. C.....	2,000	.....

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
Wilmington (N. C.) district:		
Waterway between Beaufort Harbor and New River, N. C. (i. e., portion between Beaufort and Swanboro).....	\$4, 500	.....
Morehead City Harbor, N. C.....	2, 500	.....
Cape Fear River, N. C., at and below Wilmington.....	30, 000	.....
Cape Fear River above Wilmington, N. C., locks and dams.....	12, 000	\$40, 000
Charleston (S. C.) district:		
Winyah Bay, S. C.....	50, 000	50, 000
Inland waterways between Charleston Harbor, S. C., and Alligator Creek (opposite McClellansville), S. C.....	5, 000	.....
Charleston Harbor, S. C.....	40, 000	70, 000
Savannah (Ga.) district:		
Savannah Harbor, Ga.....	100, 000	.....
Sapelo Harbor, Ga.....	2, 000	.....
Satilla River, Ga.....	2, 000	.....
Altamaha, Oconee, and Ocmulgee Rivers, Ga.....		40, 000
Brunswick Harbor, Ga.....	20, 000	.....
Jacksonville (Fla.) district:		
Miami Harbor (Biscayne Bay), Fla.....	20, 000	.....
Caloosahatchee River, Fla.....	4, 000	.....
Hillsboro Bay, Fla.....	20, 000	300, 000
Removing the water hyacinth from navigable waters in the State of Florida.....	8, 000	.....
Montgomery (Ala.), district:		
Apalachicola Bay, Fla.....	9, 000	.....
Holmes River, Fla.....	2, 000	.....
Pensacola Harbor, Fla.....	15, 000	.....
Mobile (Ala.), district:		
Mobile Harbor, Ala.....	160, 000	100, 000
G. I. port Harbor and Ship Island Pass, Miss.....		80, 000
Pascagoula River, Miss.....	10, 000	.....
Biloxi Harbor, Miss.....	5, 000	.....
New Orleans (La.), district:		
Passes of Mississippi River—		
Southwest Pass.....		1, 450, 000
South Pass (channel (maintenance)).....	250, 000	.....
Calcasieu River and Pass, La.....	5, 000	.....
Removing the water hyacinth, Louisiana, Alabama, Mississippi, and Texas.....	20, 000	.....
Galveston (Tex.), district:		
Galveston Harbor, Tex. (modification of project adopted).....	100, 000	200, 000
Galveston Channel, Tex.....		
Dallas (Tex.) district:		
Sabine-Neches Canal, Tex.....	20, 000	.....
Cypress Bayou and waterway between Jefferson, Tex., and Shreveport, La.....	5, 000	.....
Vicksburg (Miss.) district:		
Red River below Fulton, Ark.....	50, 000	.....
Ouachita and Black Rivers, Ark. and La.....	20, 000	\$100, 000
Yazoo River, Miss.....	15, 000	.....
Tallahatchie and Coldwater Rivers, Miss.....	10, 000	.....
Little Rock (Ark.) district:		
Current River, Ark. and Mo.....	1, 000	.....
St. Francis and L'Anguille Rivers and Blackfish Bayou, Ark.....	4, 000	.....
St. Louis (Mo.) district:		
Mississippi River, between the Ohio and Missouri Rivers.....		100, 000

¹ Includes maintenance.

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
Rock Island (Ill.) district:		
Mississippi River, between Missouri River and Minneapolis, Minn.....		¹ \$500, 000
St. Paul (Minn.) district:		
Mississippi River between St. Paul and Minneapolis, Minn.....		80, 000
Reservoirs at headwaters of Mississippi River.....		32, 000
Warroad Harbor and Warroad River, Minn.....	\$4, 000	
Zippel Bay, Lake of the Woods, Minn.....	2, 000	
Kansas City (Mo.) district:		
Missouri River, Kansas City to the mouth.....	100, 000	400, 000
Nashville (Tenn.) district:		
Cumberland River, Tenn. and Ky., above Nashville.....	5, 000	
Chattanooga (Tenn.) district:		
Tennessee River above Chattanooga.....		¹ 160, 000
Tennessee River, Chattanooga to Riverton.....		40, 000
Tennessee River below Riverton.....	15, 000	128, 000
Ohio River: Construction of locks and dams.....		5, 000, 000
Pittsburgh (Pa.) district:		
Allegheny River, Pa., open-channel work.....	5, 000	
Allegheny River, Pa., construction of locks and dams.....		500, 000
Pittsburgh Harbor, Pa.....	6, 000	
Duluth (Minn.) district:		
Ashland Harbor, Wis.....	6, 000	
Keweenaw waterway, Mich.....	15, 000	
Milwaukee (Wis.) district:		
Manistique Harbor, Mich.....	6, 000	
Green Bay Harbor, Wis.....	13, 500	
Fox River, Wis.....		¹ 22, 500
Sturgeon Bay and Lake Michigan Ship Canal, Wis.....	13, 500	
Algoma Harbor, Wis.....	10, 000	
Two Rivers Harbor, Wis.....	3, 350	
Manitowoc Harbor, Wis.....	13, 000	
Sheboygan Harbor, Wis.....	14, 500	
Port Washington Harbor, Wis.....	2, 000	
Milwaukee Harbor, Wis.—Outer harbor.....	12, 500	
Kenosha Harbor, Wis.....	4, 500	
Waukegan Harbor, Ill.....	6, 000	
Grand Rapids (Mich.) district:		
South Haven Harbor, Mich.....	4, 000	
Grand Haven Harbor, Mich.....	25, 000	
White Lake Harbor, Mich.....	3, 500	
Manistee Harbor, Mich.....	6, 000	
Frankfort Harbor, Mich.....	27, 000	
Charlevoix Harbor, Mich.....	5, 000	
Detroit (Mich.) district:		
St. Marys River, Mich. (fourth lock).....		470, 000
Channels in Lake St. Clair, Mich.....	50, 000	
Alpena Harbor, Mich.....	7, 000	
Harbor Beach Harbor of Refuge, Mich.....		106, 000
Cleveland (Ohio) district:		
Toledo Harbor, Ohio.....	35, 000	
Sandusky Harbor, Ohio.....	10, 000	
Huron Harbor, Ohio.....	5, 000	
Buffalo (N. Y.) district:		
Erie Harbor, Pa.....	50, 000	
Black Rock Channel and Tonawanda Harbor, N. Y.....	10, 000	
Niagara River, N. Y.....	1, 000	
Charlotte Harbor, N. Y.....	13, 000	

¹ Includes maintenance.

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
<i>Los Angeles (Cal.) district:</i>		
Los Angeles Harbor, Cal.: Inner harbor.....		\$100,000
Waterway connecting Long Beach and Los Angeles Harbor, Cal.....		130,350
<i>First San Francisco (Cal.) District:</i>		
Oakland Harbor, Cal.....	\$4,000	100,000
Crescent City Harbor, Cal. (on condition local interests contribute \$200,000 in cash to commence operations).		
<i>Third San Francisco District:</i>		
Mokelumne River, Cal.....	500	
Sacramento River, Cal.....	10,000	
<i>First Portland (Oreg.) District:</i>		
Cook Bay, Oreg.....		140,000
<i>Second Portland (Oreg.) District:</i>		
Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg.....		1250,000
Clatskanie River, Oreg.....	1,000	
Lewis River, Wash.....	4,500	13,500
Cowlitz River, Wash.....	6,000	
Grays River, Wash.....	500	
<i>Seattle (Wash.) District:</i>		
Puget Sound and its tributary waters, Wash.....	10,000	
Total.....	2,358,050	16,669,850
Examinations, surveys, and contingencies for rivers and harbors.....		200,000
Grand total for bill.....		19,227,900

¹ Includes maintenance.

The bill carries cash appropriations totaling \$19,227,900.* This gross sum is made up of appropriations for the following purposes:

For maintenance.....	\$2,358,050
For maintenance and continuing improvement.....	2,642,500
For improvements.....	14,027,350
For surveys and contingencies.....	200,000

Total..... 19,227,900

The appropriations for maintenance and improvements are based upon recommendations submitted by the War Department and embrace such necessary sums as may be profitably expended during the next fiscal year. In no instance have the committee increased the appropriations above the amounts so recommended. Admittedly, the sums appropriated were reduced in the interest of economy. No channel or harbor will be neglected, and it is believed that the funds appropriated will be sufficient to maintain the channels and existing works and prevent deterioration. For projects which are under improvement the sums appropriated are sufficient to continue the work of improvement and maintain the organization and Government plants. Due regard has been given to the increased cost of labor and materials. It is believed that no work has been provided for which could be safely or wisely postponed. For very

important projects, or for those which were intimately associated with the prosecution of the war, such as Norfolk Harbor and New York Harbor, comparatively large sums have been provided.

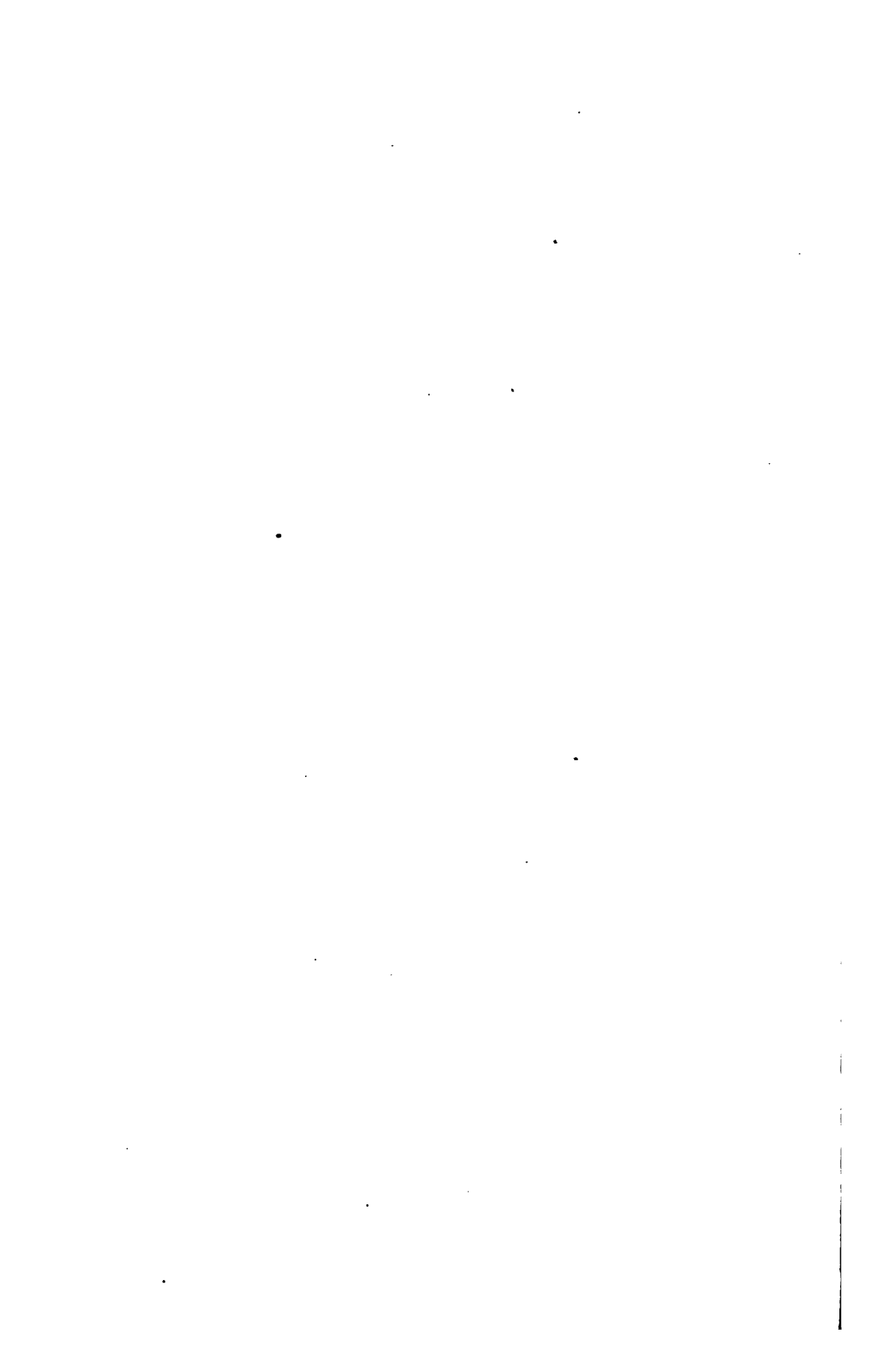
No new projects requiring an appropriation have been included in the bill except such as were associated with the prosecution of the war and so recommended by the War Department. The only new projects carried in the bill are for the waterway connecting Long Beach Harbor with Los Angeles Harbor, Cal.; Crescent City Harbor, Cal., and a modification of the existing project for Galveston Harbor, and only the waterway connecting Long Beach and Los Angeles Harbors carries an appropriation.

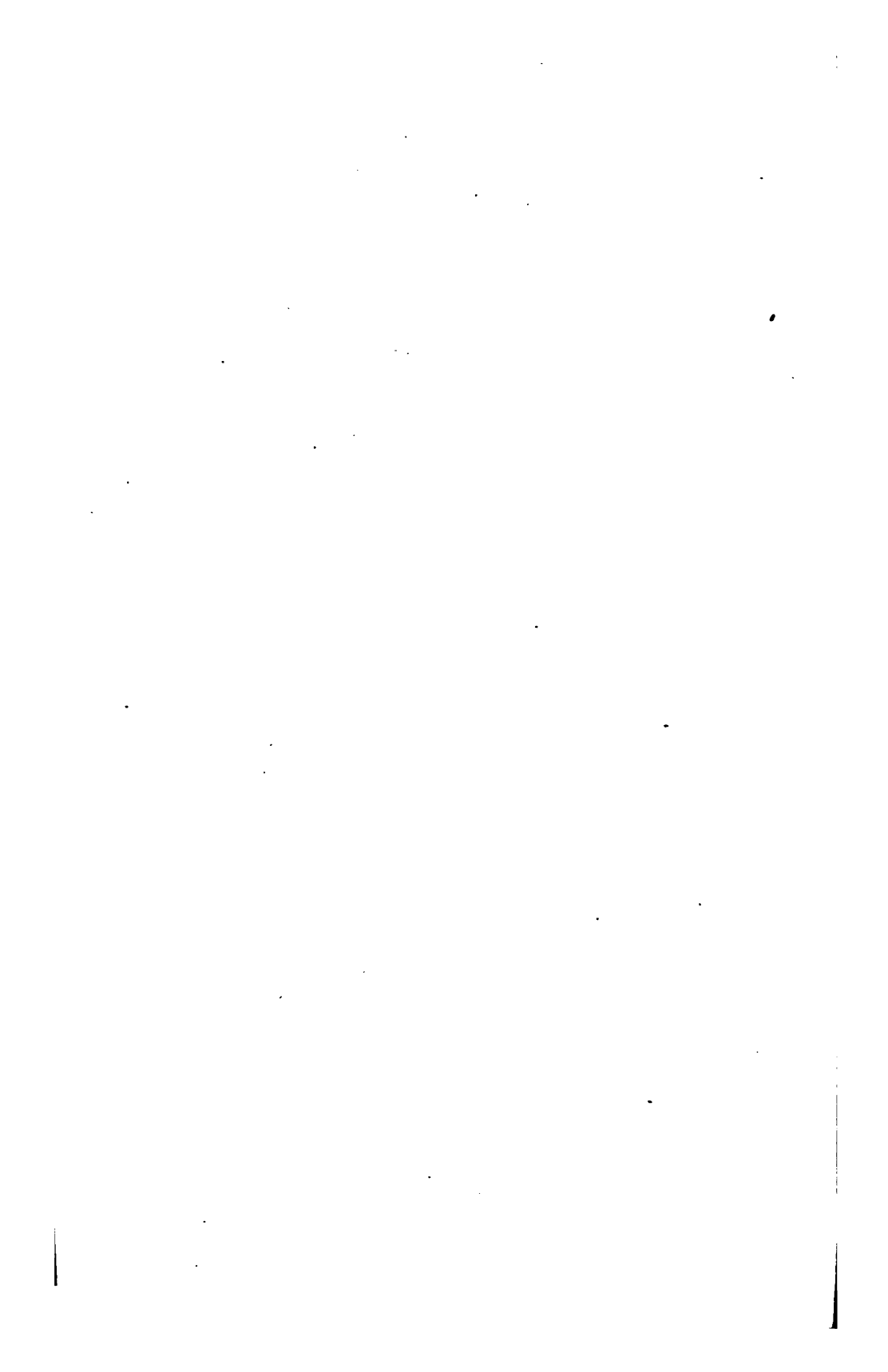
No new surveys are provided in the bill. In view of the fact that no reports have been made upon a large number of surveys heretofore authorized and the further fact that a large proportion of the officers of the Engineer Corps have been detailed for active military service, the committee deemed it wise to omit authorization for any surveys.

TERMINAL FACILITIES.

The committee have instituted a constructive policy regarding the promotion of water transportation upon our rivers and harbors. Among other essentials for water transportation are adequate water terminals. Facilities for loading and unloading water carriers quickly and cheaply are essential for local traffic and absolutely indispensable for the interchange of traffic between water carriers and rail carriers. The committee, in section 8 of the bill, have directed the Chief of Engineers, in his annual reports, upon every project under maintenance or further improvement by the United States, to submit information as to existing terminal facilities and to make special reports from time to time. The Chief of Engineers is also required to detail one or more engineer officers to investigate the general subject of water terminals, with descriptions and general plans of appropriate types and construction for harbors and waterways suitable for various commercial purposes and adapted to the varying physical conditions. The provision of terminals must depend upon local cooperation. The committee wish that the fullest publicity may be given to the proposition that only those harbors and rivers will be improved where cities and localities offer satisfactory assurance of cooperation in providing transportation lines, water terminals, and interchange of traffic with the railroads.

The committee invite critical study of the bill which they have submitted. They invite criticism from the public and the press in the spirit of candor and a real desire to learn the truth. Ample facilities will be afforded to consult official reports and documents and all other available sources of information.





RIVER AND HARBOR APPROPRIATION BILL.

MARCH 1, 1918.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed.

Mr. SMALL, from the Committee on Rivers and Harbors, submitted the following

REPORT.

[To accompany H. R. 10069.]

The Committee on Rivers and Harbors, having had under consideration House bill 10069, a bill making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, respectfully reports the same with the recommendation that the bill do pass.

This is the annual appropriation bill for the maintenance and construction of the harbors and navigable waterways of the United States, for the maintenance and improvement of navigation and the promotion of water transportation.

CONTENTS OF THE BILL.

The bill makes appropriations for the maintenance of projects heretofore completed, including the maintenance of projects under improvement. It contains appropriations for the further improvement of projects heretofore adopted. These appropriations are based primarily upon estimates or recommendations submitted by the Chief of Engineers for expenditure during the ensuing fiscal year. In the language of the Chief of Engineers, the estimates represent such sums as "can be profitably expended." In this connection it may be stated that the estimates have been carefully considered in view of all the existing conditions. Among these conditions are the existence of a state of war, the high cost of all materials, and the scarcity and high cost of labor. All of these are recognized as inducements to economy and not only enter into the estimates of the Chief of Engineers but were carefully weighed by the committee in recommending the appropriations contained in the bill. There are no appropriations in the bill in excess of the estimates submitted by the Chief of Engineers.

As an illustration of the policy of economy adopted by the committee it may be stated that there are no provisions in the bill authorizing the construction of Government dredges. Some of the works of improvement originally contemplated the construction of dredges for the specific work in the interest of economy and more rapid prosecution, but in view of the excessive cost of dredge construction and the duty of conserving materials and labor for the shipbuilding program of the United States Shipping Board the committee did not deem it wise or prudent to authorize the construction of any new dredges. There are no continuing-contract authorizations in the bill. There are no new projects in the bill requiring cash appropriations or involving future obligations which are not intimately associated with the prosecution of the war and constituting war exigencies and so recommended by the Secretary of War. The only new projects are for the construction of a channel connecting Long Beach and Los Angeles Harbors, Cal., and for Crescent City Harbor, Cal. Only the first of these carries an appropriation of \$130,350. The initial expenditure on the Crescent City Harbor project, amounting to \$200,000, is to be met by local interests.

There is a third, the modification of the project at Galveston Bar, costing \$65,000; but this improvement is to be made out of the available funds on hand heretofore appropriated. No examinations and surveys are authorized.

General classification of appropriations.

For maintenance.....	\$2, 358, 050
For maintenance and continuing improvement.....	2, 642, 500
For improvements.....	14, 027, 350
For surveys and contingencies.....	200, 000
Total.....	19, 227, 900

OFFICIAL SOURCES OF ESTIMATES.

The estimates of appropriations for maintenance and further improvement are contained in the last Annual Report of the Chief of Engineers, United States Army, of 1917. This report embraces three volumes, but a detailed discussion of each project, with estimates therefor, will be found in the first volume. The estimates for new projects or modifications are contained in specific separate reports designated as House documents of a particular Congress or session and are referred to in the bill. Copies of the annual report and of the specific reports for new projects are accessible, and it is not deemed necessary to enlarge this report by attempting to summarize the contents of the annual report or the specific reports. Members and others who desire full information may readily consult these reports.

INCREASES AND DECREASES IN ESTIMATES.

Since the submission of his annual report the Chief of Engineers has submitted a revision of his original estimates for certain improvements, representing increases as to some and decreases in others. This revision was based upon conditions which had arisen since the

submission of the annual report. The following statement contains a list of improvements involving changes from the original estimates:

Increases:

Delaware River, from Laylor Street, Trenton, to the upper railroad bridge.....	\$95, 000
Wilmington Harbor, Del.....	20, 000
Potomac River at Washington, D. C.....	5, 000
Appomattox River at Petersburg, Va.....	50, 000
Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C..	500, 000
Southwest Pass, Mississippi River.....	300, 000
Yazoo River, Miss.....	15, 000
Tallahatchie and Coldwater Rivers, Miss.....	10, 000
Current River, Ark. and Mo.....	1, 000
St. Francis, and L'Anguille Rivers and Blackfish Bayou, Ark.	4, 000
Erie Harbor, Pa.....	50, 000
Long Beach and Los Angeles Harbors, Cal.....	130, 350
Puget Sound and its tributary waters.....	10, 000
	<hr/> \$1, 190, 350

Decreases:

Blackwater River, Fla.....	5, 000
Examinations, surveys, and contingencies.....	100, 000
	<hr/> 105, 000

Net increase..... 1, 085. 350

The amounts opposite each improvement in the above list embrace simply the increase or decrease in estimates and not the total sums appropriated, except as to such improvements where no estimates were originally submitted. Explanations of the facts and reasons given by the Chief of Engineers for the increases or decreases appear in statements made by the representative of the Chief of Engineers in hearings before the committee, and which have been printed and now are available, except as to the Delaware River, at Trenton, the Southwest Pass, Mississippi River, and the Appomattox River, at Petersburg. In explanation of the increased estimates for the Delaware River, at Trenton, and the Southwest Pass, Mississippi River, a letter from the Chief of Engineers to the chairman of the committee is now submitted:

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, February 20, 1918.

Hon. JOHN H. SMALL,
Chairman Committee on Rivers and Harbors, House of Representatives.

MY DEAR MR. SMALL: 1. In response to your inquiry of February 18, concerning the necessity for the increased estimates submitted to your committee by Col. Newcomer for the Delaware River at Trenton and for the Passes of the Mississippi River, I have the honor to confirm in writing the oral statements that he made to your committee substantially as follows:

DELAWARE RIVER AT TRENTON.

2. When the annual report for the fiscal year was submitted by the district engineer in July, 1917, he included an estimate of \$55,000 for completing the improvement from Laylor Street, Trenton, to the upper railroad bridge. Since that time a more complete investigation indicates that there is a large additional amount of ledge rock to be removed, much of which was not known at that time to exist. The district engineer has just submitted a report upon the situation indicating that the amount required to complete should be increased from \$55,000 to \$150,000. The city of Trenton has undertaken work involving a heavy expenditure for the construction of a public terminal at the upper end of this channel, and it is very important to have the channel completed as soon as possible in order that this terminal may be fully utilized. The appropriation of the full sum is, therefore, urgently recommended.

PASSES OF THE MISSISSIPPI RIVER.

3. Since the original estimates for this improvement were submitted it has been found that the work contemplated with the funds on hand will be more expensive than was originally anticipated. One of the main items of the work is the construction of the inner jetties or bulkheads of the Southwest Pass. When bids were received for this work, it was found that the price was increased over 50 per cent above the last contract price for similar work. It was at first expected that on account of the largely increased cost this bulkhead work would be omitted for the present, and that a larger amount of spur dike construction would be undertaken with the Government plant. Slight changes have been made in the specifications, however, which have resulted in some reduction in the price for which the contractor is willing to do the work, and as investigation shows that this price is reasonable under present conditions, it was decided, on account of the importance of the work, to continue the bulkhead construction at once, notwithstanding the increased cost. A careful review of the situation indicates that in order to continue the work and make the additional contracts which should be let during this calendar year for its expeditious prosecution, there is required an increase of \$300,000 in the estimate submitted for the Southwest Pass, changing it from \$1,150,000 to \$1,450,000, or giving a total for the passes of \$1,700,000, including the \$250,000 required for the South Pass.

Very truly, yours,

W. M. BLACK,
Major General, Chief of Engineers.

The appropriation of \$50,000 for the Appomattox River is for the maintenance and completion of the diversion channel at Petersburg and based upon a project heretofore adopted. The details of the work to be done, the extent of the local cooperation, and the cost of this diversion channel is embraced in a report from Col. J. P. Jervey to the Chief of Engineers, dated December 19, 1916, and contained in the printed hearing on the Appomattox River before the committee at this session. The Chief of Engineers estimates that the sum of \$50,000 appropriated in this bill, together with the available balance, will complete the diversion channel, plus the local cooperation by the city of Petersburg and the Norfolk & Western Railroad. The item of appropriation for Long Beach and Los Angeles Harbor of \$130,350 provides for the connecting channel between these two harbors, and is a new project, and recommended as a war exigency by the Secretary of War. It will be noted that the estimate of \$300,000 for examinations, surveys, and contingencies is reduced by \$100,000. This reduction was by reason of the exclusion of authorizations for surveys in the pending bill. The sum appropriated is necessary to meet the probable deficit in the costs of examination and surveys heretofore authorized, and upon which no reports have yet been submitted.

There is appended to this report an itemized statement of all appropriations contained in the bill, and which for reference is marked "Exhibit A."

There is also appended to this report a communication from the Secretary of War to the chairman of the committee, dated February 19, 1918, recommending the inclusion of the new projects for Los Angeles and Long Beach Harbors, Cal., and for Crescent City Harbor, Cal., and which for reference is marked "Exhibit B."

SURVEYS.

The committee, after careful consideration, concluded it would be unwise and unnecessary to include in this bill any authorizations for examinations and surveys of new projects. The following are

among some of the controlling reasons which actuated the committee. There are about 150 authorizations for surveys heretofore made upon which no report has yet been submitted. Many of the officers of the engineer corps heretofore engaged in river and harbor work have been detailed for active military service and will probably so continue during the period of the war. The next annual river and harbor bill will become a law on or before March 4, 1919, and if any examinations and surveys were authorized in this bill it is improbable that the surveys could be made and the report submitted before that date. Again, it was not thought advisable during this critical period of the war to authorize any additional surveys unless it could be shown that they were essential as being associated with the prosecution of the war. As a further reason and indicating the attitude of Congress, it may be stated that the last river and harbor act, approved August 8, 1917, contained a provision that no survey therein provided should be made "until after the close of the war with Germany except such as the Secretary of War shall direct."

SECTION 2.

Section 2 of the bill applies to consolidated, or group items, for which an aggregate appropriation is made in the bill and a similar section was enacted in the last preceding river and harbor act.

SECTION 4.

Section 4 is a repetition of a similar section in the two preceding river and harbor acts except that in the present bill it is made applicable to this and future appropriations and becomes a part of the permanent law.

SECTION 5.

This section is intended to prohibit the pollution of the navigable waters of the United States. The proviso at the end of this section refers to section 17 of the river and harbor act approved March 3, 1899, which directs the Department of Justice to enforce the provisions of this section and specifies the procedure to be followed. In further explanation of the necessity of such a law, the Chief of Engineers has submitted to the committee a memorandum as follows:

MEMORANDUM ON DISCHARGE OF ACID WASTES INTO NAVIGABLE WATERS.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, January 30, 1918.

The discharge of acid and acid waste into the navigable waters of the United States by the numerous mines and manufacturing establishments operating near such waters, has been the subject of complaint for many years.

It has been generally recognized and admitted for a long time that such discharge pollutes the streams, destroys fish and fish life, and renders the waters insanitary and unfit for ordinary domestic purposes; but as these are matters peculiarly of local concern, and subject to corrective regulation and control under State and municipal laws, they did not seem to call for any Federal action.

Studies and investigations in recent years, however, have demonstrated beyond question that the practice has increased to such an extent as to cause very serious

injury to commerce and navigation, as well as direct damage to the Government, especially on such important rivers as the Monongahela, Allegheny, and Ohio. Careful tests made in the pools above the navigation dams in the Pittsburgh district show that the quantity of free acid discharged from mines, coal washers, and mills into these rivers aggregate about 6,500 tons per day.

The presence of acid and acid salts in the water results in deterioration to the boilers and hulls of steamboats, and damage to the submerged metal parts of the Government locks and dams.

For use in boilers the water has to be subjected to a special treatment, the expense of which is considerable, and in spite of the treatment experience has shown that the life of the boilers is only about half what it should be. Formerly the boilers of vessels using these waters lasted, with average annual repairs, 20 years; with similar repairs they now last only 10 years. In other words, the boilers in boats employed in commerce, and those in the boats belonging to the Government and used for purposes of improvement, must be wholly renewed once in 10 years, instead of once in 20 years. It is estimated that the annual loss to these vessels in this district alone, due to acid, is nearly \$25,000.

The damage done to the Government locks and dams is extensive. The valves, gates, plates, operating chains, and all metal parts below water are corroded and eaten away by the action of the acid. Posts have been found almost eaten through after a few years' service, when in pure water they ought to be almost as good as new. While it is difficult to fix the exact money value of the damage done to these works, yet, from careful estimates, excluding as far as possible all other causes, it is safe to say that the cost to the United States of deterioration due to acid in the waters is not less than \$25,000 a year on the Monogahela, and not less than \$32,000 a year on the Ohio.

It is believed, therefore, that the proper conservation of purely Federal interests requires legislation by means of which this evil may be limited and corrected, and a proposed draft is submitted for consideration.

SECTION 6.

This section, as its terms imply, authorizes the United States to take immediate possession of any lands or easements necessary in the work of any river and harbor improvement duly authorized by Congress, upon the filing of the petition in condemnation proceedings. The necessity of such a law has been illustrated in many instances. In some cases important and urgent works of improvement have been delayed for one or more years awaiting the completion of condemnation proceedings through the process of appeals, and in some instances the owner of the property seeks by such delay to obtain an excessive price. It is intended by this section, if enacted into law, to avoid unjustifiable delays and thereby permit works of improvement to be instituted at an earlier date. The section contains provisions which safeguard the property rights of the citizen and assurance that the award will be paid at the conclusion of the condemnation proceeding.

SECTION 7.

This section provides that in condemnation proceedings instituted by the United States for the acquirement of private property for public use in connection with any improvement of rivers and harbors the jury, in making the award, shall take into consideration any special or direct benefits to the part of the property not so taken. Careful investigation has been made of existing law upon this subject and it is believed that the proposed law is necessary and wise. It is quite probable that existing law in the United States justifies, if not requires, the consideration of direct benefits, but in some of the Federal courts it has been held that the jury may not consider direct

benefits unless authorized by statute. Under a law of Congress approved April 24, 1888, the Secretary of War is authorized to institute proceedings in the name of the United States for the condemnation of any land or private property and that such proceedings shall "be prosecuted in accordance with the laws relating to suits for the condemnation of property of the State wherein the proceedings may be instituted." An examination of the laws of the several States discloses that some States have no statutes directing the consideration of benefits and that in some State courts the jury may not consider direct benefits unless authorized by statute. In view of the diversity of opinion, and in further view of the obvious proposition that direct benefits should be considered in ascertaining the "just compensation" required by the Constitution, it is believed that the law proposed by this statute is wise and necessary.

SECTION 8.

This section directs the Chief of Engineers, in his annual report, to indicate the character and adequacy of terminal and transfer facilities existing on every harbor and waterway under maintenance or improvement by the United States. He is further required to submit special reports from time to time giving fuller information regarding such water terminals. He is also required to make an investigation of the general subject of water terminals and report descriptions and general plans of terminals of appropriate types and construction suitable for various commercial purposes and adapted to the varying condition of tides, floods, and other physical characteristics.

It will be conceded that water terminals, properly equipped for the expeditious and economical transfer of freight, are essential both for local and other traffic. The purpose of this section is to obtain information as to the status of water terminals upon every navigable waterway and to have available general plans and types of terminals for the information of cities and localities.

WATER TRANSPORTATION.

If there have been any skeptics in the past regarding the necessity for the facilities of water transportation, such doubts must have been removed by recent developments. The continued increase in production has not only equalled the facilities for transportation by rail, but during prosperous periods and under abnormal conditions the railroad of the country have demonstrated their inability to meet the demands of transportation. This condition has been acutely demonstrated during this war. In many respects the system of railway transportation in the United States is superior to that of any other country, although in recent years they have apparently been unable to provide the necessary additions to their tracks, terminals, rolling stock, and other equipment. However, even with adequate betterments, it is probably true that they can not under abnormal conditions meet the demands for traffic movement. We have in the United States a great number of fine harbors and thousands of miles of navigable waterways. Many of the harbors through local cooperation have provided piers and modern water terminals with transfer facilities to handle the traffic. On a few rivers the same facilities have been provided and a large water commerce exists.

On many navigable rivers, however, even where channels have been provided suitable for navigation, there exists small commerce and only crude and inadequate facilities. On some of these interior rivers a substantial commerce which existed in former years has gradually decreased and water transportation lines have been abandoned. The time has certainly arrived for a study of the causes which have produced these results. This committee have attempted to give the subject careful consideration and earnestly desire to promote a constructive policy.

It is obvious that a mere channel will not in itself promote water transportation. Some of the essentials may be summarized. Water transportation lines must be organized with ample capital, with steamers and barges of appropriate type and operated under capable management as to traffic and other conditions.

There must be constructed at all cities and towns water terminals suitable to the demands of traffic and the commercial requirements. It is not appropriate in this report to refer to all the features which constitute an adequate water terminal, but it may be stated that such a terminal must have ample water front, substantial piers, capacious warehouses, facilities for transfer expeditiously and economically, and that such terminal shall be connected by a belt line with all the railroads serving the community.

There must also exist a complete system for the interchange of traffic between the water lines and the railroads with joint through rates to the end that products may be moved partly by water and partly by rail between the point of origin and destination.

All of these facilities under our present policy must be effected through civic enterprise and local cooperation. All that Congress may do is to provide channels and to enact wise and efficient laws for the accomplishment of these essentials. In addition Congress may provide educational agencies by which localities may be instructed and encouraged in providing these facilities,

As navigable waterways are within the jurisdiction of the United States and their improvement is a function of the Federal Government Congress may predicate appropriations for the maintenance and improvement of these waterways upon the condition that the essential facilities for efficient water transportation shall be provided by the localities. As the House of Representatives must initiate appropriations for such improvements it is apparent that both a duty and an opportunity is presented. This committee will be gratified if it could initiate and maintain such a constructive program. The plan involves no discovery or peculiar knowledge of the subject. The value of these facilities in the promotion and maintenance of water transportation have been demonstrated on many rivers and harbors. The difficulty lies in their insistent application. Persistence and courage are necessary. In no event can such a policy be translated into law unless it is sustained by an enlightened public sentiment and receives the approval of Congress.

EXHIBIT A.

**MEMORANDA RELATING TO APPROPRIATIONS INCLUDED IN
RIVER AND HARBOR BILL.**

Project.	Maintenance.	Further improvement.
Boston (Mass.) district: Boston Harbor, Mass.....	\$40,000	.....
Newport (R. I.) district:		
New Bedford and Fairhaven Harbors, Mass.....	15,000	.....
Pawtucket (Seekonk) River, R. I.....	10,000	.....
New London (Conn.) district:		
Pawcatuck River, R. I. and Conn.....		\$2,500
Connecticut River below Hartford, Conn.....	15,000	.....
New Haven Harbor, Conn.....	14,000	.....
Housatonic River, Conn.....	8,000	.....
First New York (N. Y.) district:		
East River and Hell Gate, N. Y.....		2,200,000
Hudson River Channel, New York Harbor.....		200,000
Narrows of Lake Champlain, N. Y. and Vt.....		200,000
Second New York (N. Y.) district:		
New York Harbor, channel between Staten Island and Hoffman and Swinburne Islands.....		75,000
Newtown Creek, N. Y.....	15,000	.....
Mattituck Harbor, N. Y.....	5,000	.....
Third New York (N. Y.) district:		
Shrewsbury River, N. J.....	10,000	.....
Philadelphia (Pa.) district:		
Delaware River, N. J., Lalor Street, Trenton, to upper railroad bridge.....		150,000
Delaware River, Pa., N. J., and Del., Philadelphia, Pa., to the sea.....	450,000	650,000
Schuylkill River, Pa.....		300,000
Wilmington (Del.) district:		
Absecon Inlet, N. J.....	20,000	.....
Wilmington Harbor, Del.....	50,000	.....
Waterway on the coast of Virginia.....	1,000	.....
Baltimore (Md.) district:		
Baltimore Harbor and Channels, Md.....	100,000	200,000
Wicomico River, Md.....	3,000	.....
Washington (D. C.) district:		
Potomac River at Washington, D. C.....	5,000	.....
Potomac River at Lower Cedar Point, Md.....	3,000	.....
Occoquan Creek, Va.....	3,000	.....
Norfolk (Va.) district:		
Norfolk Harbor and Channels, Va.—		
Norfolk Harbor, Va.....		1,134,000
Thimble Shoal Channel, Va.....		400,000
Appomattox River, Va.....		50,000
Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C.....		500,000
Wilmington (N. C.) district:		
Pamlico and Tar Rivers, N. C.....	9,000	.....
Neuse River, N. C.....	9,000	.....
Contentnea Creek, N. C.....	1,200	.....
Beaufort Harbor, N. C.....	4,000	.....
Waterway connecting Core Sound and Beaufort Harbor, N. C.....	2,000	.....

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
Wilmington (N. C.) district:		
Waterway between Beaufort Harbor and New River, N. C. (i. e., portion between Beaufort and Swanboro).....	\$4, 500	.....
Morehead City Harbor, N. C.....	2, 500	.....
Cape Fear River, N. C., at and below Wilmington.....	30, 000	.....
Cape Fear River above Wilmington, N. C., locks and dams.....	12, 000	\$40, 000
Charleston (S. C.) district:		
Winyah Bay, S. C.....	50, 000	50, 000
Inland waterways between Charleston Harbor, S. C., and Alligator Creek (opposite McClellansville), S. C.....	5, 000	.....
Charleston Harbor, S. C.....	40, 000	70, 000
Savannah (Ga.) district:		
Savannah Harbor, Ga.....	100, 000	.....
Sapelo Harbor, Ga.....	2, 000	.....
Satilla River, Ga.....	2, 000	.....
Altamaha, Oconee, and Ocmulgee Rivers, Ga.....		40, 000
Brunswick Harbor, Ga.....	20, 000	.....
Jacksonville (Fla.) district:		
Miami Harbor (Biscayne Bay), Fla.....	20, 000	.....
Caloosahatchee River, Fla.....	4, 000	.....
Hillsboro Bay, Fla.....	20, 000	300, 000
Removing the water hyacinth from navigable waters in the State of Florida.....	8, 000	.....
Montgomery (Ala.) district:		
Apalachicola Bay, Fla.....	9, 000	.....
Holmes River, Fla.....	2, 000	.....
Pensacola Harbor, Fla.....	15, 000	.....
Mobile (Ala.) district:		
Mobile Harbor, Ala.....	160, 000	100, 000
Godport Harbor and Ship Island Pass, Miss.....		180, 000
Pascagoula River, Miss.....	10, 000	.....
Biloxi Harbor, Miss.....	5, 000	.....
New Orleans (La.) district:		
Passes of Mississippi River—		
Southwest Pass.....		1, 450, 000
South Pass (channel (maintenance)).....	250, 000	.....
Calcasieu River and Pass, La.....	5, 000	.....
Removing the water hyacinth, Louisiana, Alabama, Mississippi, and Texas.....	20, 000	.....
Galveston (Tex.) district:		
Galveston Harbor, Tex. (modification of project adopted). Galveston Channel, Tex.....	100, 000	200, 000
Dallas (Tex.) district:		
Sabine-Neches Canal, Tex.....	20, 000	.....
Cypress Bayou and waterway between Jefferson, Tex., and Shreveport, La.....	5, 000	.....
Vicksburg (Miss.) district:		
Red River below Fulton, Ark.....	50, 000	.....
Ouachita and Black Rivers, Ark. and La.....	20, 000	\$100, 000
Yazoo River, Miss.....	15, 000	.....
Tallahatchie and Coldwater Rivers, Miss.....	10, 000	.....
Little Rock (Ark.) district:		
Current River, Ark. and Mo.....	1, 000	.....
St. Francis and L'Anquille Rivers and Blackfish Bayou, Ark.....	4, 000	.....
St. Louis (Mo.) district:		
Mississippi River, between the Ohio and Missouri Rivers.....		100, 000

¹ Includes maintenance.

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
Rock Island (Ill.) district:		
Mississippi River, between Missouri River and Minneapolis, Minn.		¹ \$500,000
St. Paul (Minn.) district:		
Mississippi River between St. Paul and Minneapolis, Minn.		80,000
Reservoirs at headwaters of Mississippi River.		32,000
Warroad Harbor and Warroad River, Minn.	\$4,000	
Zippel Bay, Lake of the Woods, Minn.	2,000	
Kansas City (Mo.) district:		
Missouri River, Kansas City to the mouth.	100,000	400,000
Nashville (Tenn.) district:		
Cumberland River, Tenn. and Ky., above Nashville.	5,000	
Chattanooga (Tenn.) district:		
Tennessee River above Chattanooga.		¹ 160,000
Tennessee River, Chattanooga to Riverton.		40,000
Tennessee River below Riverton.	15,000	128,000
Ohio River: Construction of locks and dams.		5,000,000
Pittsburgh (Pa.) district:		
Allegheny River, Pa., open-channel work.	5,000	
Allegheny River, Pa., construction of locks and dams.		500,000
Pittsburgh Harbor, Pa.	6,000	
Duluth (Minn.) district:		
Ashland Harbor, Wis.	6,000	
Keweenaw waterway, Mich.	15,000	
Milwaukee (Wis.) district:		
Manistique Harbor, Mich.	6,000	
Green Bay Harbor, Wis.	13,500	
Fox River, Wis.		¹ 22,500
Sturgeon Bay and Lake Michigan Ship Canal, Wis.	13,500	
Algoma Harbor, Wis.	10,000	
Two Rivers Harbor, Wis.	3,350	
Manitowoc Harbor, Wis.	13,000	
Sheboygan Harbor, Wis.	14,500	
Port Washington Harbor, Wis.	2,000	
Milwaukee Harbor, Wis.—Outer harbor.	12,500	
Kenosha Harbor, Wis.	4,500	
Waukegan Harbor, Ill.	6,000	
Grand Rapids (Mich.) district:		
South Haven Harbor, Mich.	4,000	
Grand Haven Harbor, Mich.	25,000	
White Lake Harbor, Mich.	3,500	
Manistee Harbor, Mich.	6,000	
Frankfort Harbor, Mich.	27,000	
Charlevoix Harbor, Mich.	5,000	
Detroit (Mich.) district:		
St. Marys River, Mich. (fourth lock).		470,000
Channels in Lake St. Clair, Mich.	50,000	
Alpena Harbor, Mich.	7,000	
Harbor Beach Harbor of Refuge, Mich.		106,000
Cleveland (Ohio) district:		
Toledo Harbor, Ohio.	35,000	
Sandusky Harbor, Ohio.	10,000	
Huron Harbor, Ohio.	5,000	
Buffalo (N. Y.) district:		
Erie Harbor, Pa.	50,000	
Black Rock Channel and Tonawanda Harbor, N. Y.	10,000	
Niagara River, N. Y.	1,000	
Charlotte Harbor, N. Y.	13,000	

¹ Includes maintenance.

Memoranda relating to appropriations to be included in river and harbor bill as decided upon by the committee Feb. 20, 1918—Continued.

Project.	Maintenance.	Further improvement.
Los Angeles (Cal.) district:		
Los Angeles Harbor, Cal.: Inner harbor.....		\$100,000
Waterway connecting Long Beach and Los Angeles Harbors, Cal.....		130,350
First San Francisco (Cal.) District:		
Oakland Harbor, Cal.....	\$4,000	100,000
Crescent City Harbor, Cal. (on condition local interests contribute \$200,000 in cash to commence operations).		
Third San Francisco District:		
Mokelumne River, Cal.....	500	
Sacramento River, Cal.....	10,000	
First Portland (Oreg.) District:		
Coos Bay, Oreg.....		¹ 40,000
Second Portland (Oreg.) District:		
Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg.....		¹ 250,000
Clatskanie River, Oreg.....	1,000	
Lewis River, Wash.....	4,500	13,500
Cowlitz River, Wash.....	6,000	
Grays River, Wash.....	500	
Seattle (Wash.) District:		
Puget Sound and its tributary waters, Wash.....	10,000	
Total.....	2,358,050	16,669,850
Examinations, surveys, and contingencies for rivers and harbors.....		200,000
Grand total for bill.....		19,227,900

¹ Includes maintenance.

EXHIBIT B.

WAR DEPARTMENT,
Washington, February 19, 1918.

HON. JOHN H. SMALL,
Chairman Committee on Rivers and Harbors, House of Representatives.

DEAR SIR: Referring to your letters of February 8 and 9, addressed to the Chief of Engineers, concerning certain projects that are being urged as war measures, and in compliance with your oral request, transmitted through Col. Newcomer when he appeared before your committee, that I express my views upon these projects, I have the honor to submit the following statement:

The Engineer Department has consulted the Government agency that is directly concerned in each case where a war necessity was alleged for any new work, and in the following cases the project referred to and the agency consulted is stated with its decision. I concur with the Chief of Engineers in his recommendation that action be taken in accord with the respective decisions.

LOS ANGELES AND LONG BEACH HARBORS, CAL.

The project for the channel connecting these harbors was urged particularly in connection with the operations of the Shipping Board, and a letter was first written by Mr. Piez, vice president and general manager, indicating the advisability of the work, but not clearly setting forth its character as a war necessity. The matter has been further investigated by the Shipping Board and further letters, indicating the need of this work as a war measure, were transmitted to you by the Chief of Engineers, one dated February 13, signed by Mr. Hurley, chairman, and the other dated February 1, signed by Mr. Page, commissioner.

CRESCENT CITY HARBOR, CAL.

The special war emergency alleged in this case related to the production of chrome ore, which is essential in connection with the production of munitions and other war materials. The Geological Survey and the War Industries Board were consulted on this matter and statements by the Director of the Geological Survey and Mr. L. L. Summers, director of chemicals and explosives of the War Industries Board, indicating the military need of this work, were transmitted to you by the Chief of Engineers.

Very respectfully,

NEWTON D. BAKER,
Secretary of War.



RIVER AND HARBOR APPROPRIATION BILL.

MARCH 1, 1918.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed.

Mr. FREAR, from the Committee on Rivers and Harbors, submitted the following

MINORITY VIEWS:

[To accompany H. R. 10066.]

I concur with the majority views to the extent that the bill as reported by the committee is the best compromise that can be secured. Under the present system, appropriations for worthy and for wasteful waterway projects are necessarily tied together in an omnibus bill and conflicting locality interests, rather than public necessity, often control.

The bill carries \$19,227,900, of which amount only \$2,358,050 is for maintenance, \$2,642,500 for mixed maintenance and improvement, and \$14,027,350, or six times the cost of maintenance, is for new improvements. The character of some of these "improvements" will be referred to briefly in order to show gross extravagance in present methods. The total of \$19,227,900 is less than one-half of the average bill presented during the past seven or eight years prior to 1917 and is a saving of practically \$20,000,000 to \$30,000,000, compared with other bills. Since efforts were begun five years ago to curtail waste in river and public building omnibus bills, a reduction of considerably over \$100,000,000 has been secured by the defeat or modification of such bills when compared with past legislation. Of more importance than the money saving is an effort to provide for legitimate commercial needs and to prepare bills in the open, but permanent reform will only be obtained through a change in the present system, which is fundamentally objectionable.

NO NEW PROJECTS.

The bill carries no new projects for the first time in years, due to the advice of the Secretary of War. This feature might be continued profitably in future bills, because 172 projects thus far approved by

Army engineers still await adoption by Congress. For the first time in many years this bill also eliminates new surveys which are ordinarily expected to bring support to such bills. This is another improvement, in view of the fact that 150 surveys authorized by Congress have not yet been made by the engineers. Pending projects now under improvement need \$160,000,000 more to complete, due to unbusinesslike methods in past years pursued in needlessly mortgaging the future. In offering a better bill than any of its predecessors during the past dozen years, credit primarily belongs to the chairman of the committee, who has striven to present a bill that will meet the demands of commerce without including many indefensible projects usually inserted to catch votes for the bill. Directions contained in the bill regarding waterway terminals and other practical suggestions have also been adopted by the committee pursuant to the chairman's recommendations. Shallow-creek items, private water-power development at public expense, private land reclamation projects, and other wasteful appropriations are reduced in number, although extravagant amounts contained in the bill for commerceless rivers are proportionately as wasteful as ever, as will be specifically indicated herein.

Due to the importance of waterway improvements needed for war purposes and for other projects vitally essential to large commercial needs, which are included, the bill is not opposed as a whole. No separate item can be modified or stricken out of an omnibus bill, because it stands or falls in its entirety, but this report briefly points out what is deemed to be reckless waste of public funds reaching several millions of dollars in the pending bill. Such items have been recommended by Government engineers for insertion in the bill, and any responsibility at this particular time for waste due to such items should be placed where it belongs.

ITEMS CARRIED BY THE BILL.

The 1918 bill is practically as recommended by the Chief of Engineers, and carries appropriations for about 65 harbors, including river approaches like the Delaware and Hudson Rivers, and for about 50 rivers, canals, and inland waterways. Few harbor appropriations invite serious criticism because deep-water commerce ordinarily justifies expenditures. No river, canal, or inland waterway, apart from deep waterways like the Great Lakes, carries commerce justifying many extravagant expenditures contained in the bill. For illustration, this bill appropriates \$5,000,000 for the Ohio, \$500,000 for the Missouri, \$500,000 for the Allegheny, \$500,000 for the Beaufort Canal, \$343,000 for the Tennessee, \$2,412,000 for the Mississippi, including the Passes, in addition to \$10,000,000 for the lower Mississippi carried in the sundry civil bill, a total of \$18,745,000 for six rivers and canals carried by both bills, at a time when the Government is straining every nerve to raise money by direct taxation, for war purposes. Believing that commercial use and expenditures should bear some relation to each other, not found with many large items contained in the bill, the following brief tabulations are offered of 1916 commerce and total expenditures on three harbors and the three largest rivers of the country, together with balances on hand and amounts carried in this bill:

Amazing comparisons of water-borne commerce and cost.

[From United States Engineers Reports, 1917.]

	Tons.	Value.	Average miles hauled.
Harbors:			
Superior-Duluth.....	52,177,330	\$387,219,625	850
Ashland.....	10,076,703	29,489,599	800
Milwaukee.....	7,925,488	267,155,651	300
Total.....	70,179,511	684,264,875	800
Rivers:			
Ohio.....	4,000,000	38,773,721	28
Mississippi.....	300,000	Indefinite.	14
Missouri.....	24,000	6,335,313	206
Total.....	4,324,000	.....	28

Ferriage and sand hauled from 1 to 2 or 3 miles, on the average, unaffected by new river improvements, is deducted because no justification exists for including such items. Three Wisconsin harbors handled about sixteen times as much actual freight and hauled it twenty-seven times as far on the average, compared with traffic on the three greatest rivers, or, expressed differently, the total actual ton mileage was four hundred times larger at these three harbors than on the three rivers.

Government expenditures furnish equally important comparisons.

Appropriations.

	Total.	1918 balances.	Appropriation, this bill.
Harbors:			
Superior-Duluth.....	\$8,116,028	\$447,002	.....
Ashland.....	644,500	20,876	\$6,000
Milwaukee.....	2,460,475	51,387	12,500
	11,221,003	519,265	18,500
Rivers:			
Ohio.....	59,016,469	7,550,164	5,000,000
Mississippi.....	170,000,000	4,500,000	2,412,000
Missouri.....	22,564,591	2,383,162	500,000
	251,611,060	14,433,326	7,712,000

Why should it cost the Government twenty times as much to furnish waterways for about 4,000,000 tons of actual commerce floated 28 miles compared to 70,000,000 tons floated 800 miles?

The foregoing includes about \$20,000,000 expended at the mouth of the Mississippi, but does not include \$10,000,000 for the lower Mississippi carried in the sundry civil bill this year. Army engineers have recommended \$5,000,000 for the Ohio River, or two hundred and seventy times as much for one river as for three harbors that furnish several hundred times the ton-mileage. What possible defense can be offered for such expenditures in war times or in any other times? This report, based on the 1918 bill, is offered in protest against a wasteful policy that ought to be corrected.

ENORMOUS RIVER COST COMPARED WITH LAKE COST.

Bearing in mind that the ton-mileage of three harbors is approximately four hundred times as large as the ton-mileage on the three greatest rivers, it is of grave public concern that total expenditures on the rivers have been over twenty times as great, and balances now on hand are twenty-seven times as large as for the three harbors. More surprising, the balances on hand alone for these three rivers exceed total appropriations for the three harbors during the past 40 years, while this bill carries three hundred and thirty-five times as much money for a small traffic on three rivers as for three harbors taken at random, which have a ton-mileage four hundred times larger than that of the rivers named. A dozen other harbors, lake and ocean, could be grouped with similar results, all disclosing the prodigal waste of public money on rivers, with approval of Government engineers, at a time when war expenses require rigid economy on the part of governments and men. Bearing on this same subject, I resubmit a table contained in the 1916 minority report.

The cost to the Government for furnishing a waterway for river commerce, per ton, is not definitely settled as to method of computation, and only approximate results can be reached because the amount properly chargeable to investment interest is variously estimated, although annual maintenance is sure and certain. Excluding ferrage, floatable timber, and sand hauled short distances, not affected by river "improvements," the following estimates, in 1916, on the several rivers and canals are noted:

	Per ton.		Per ton.
Ohio River (excluding coal \$40 per ton) -----	\$3. 00	Hennepin -----	\$36. 75
Ouachita -----	8. 00	Missouri -----	40. 00
Warrior and Tombigbee -----	12. 00	Muscle Shoals (Tennessee) -----	40. 00
Upper Mississippi -----	12. 00	Brazos -----	80. 00
Lower Mississippi -----	35. 00	Red -----	100. 00
Arkansas -----	20. 00	Big Sandy, Ky -----	350. 00

All attempts to legislate on rivers and harbors are handicapped by arguments of courtesy due from one Member to another. After a project has been adopted it is expected to be immune from criticism because of the engineers' report in its favor. New projects are not urged by Army engineers, who refuse to indicate any preference, so that the one most persistently, numerically, and powerfully pressed upon the committee is most carefully considered in the adoption of new projects. Members of the River and Harbor Committee are generally assumed to accept place on the committee because of special interest in securing the adoption of or liberal appropriations for some local project within their State or district. This situation, imposed by the present system, arouses protests from Representatives whose constituents are locally interested in any project criticized.

The minority report seeks to avoid discourtesy to any Member in or out of the committee, but any rule that prevents giving official statistics and unavoidable conclusions is unwise to invoke. From the standpoint of public use, many new projects are far more important than others included in the bill, but, under present practices, practically every extravagant project when once adopted is assured a place in future bills, irrespective of actual use or value. Every river

channel used for actual waterway traffic should be maintained at reasonable expense, but extravagant new improvements in locks, dams, increased channel depths, or for private water-power or land-reclamation schemes under the guise of improvements for navigation, ought to be prevented unless necessary for commercial or war purposes.

RIVER EXTRAVAGANCE IN THIS BILL.

This minority report will not assume to discuss in detail a number of wasteful projects contained in the bill for which appropriations are made on the recommendations of engineers. Brief comment is offered on the three largest rivers for purposes of illustration because typical of others. These three rivers receive appropriations of \$7,712,000 in this bill, or 40 per cent of the total amount appropriated by the 1918 bill. That sum is separate and in addition to \$10,000,000 more for the lower Mississippi which will be carried in the sundry civil bill for "navigation," land reclamation, and flood control, as heretofore stated. Apart from the fact that \$14,433,326 in balances were on hand for the Ohio, Mississippi, and Missouri Rivers when Army engineers recommended \$7,712,000 additional, contained in this bill, it is of startling significance that over a quarter of a billion dollars, or more than 25 per cent of all appropriations for river and harbor improvements, have been given by the Government in the past to these three rivers. Coupled with this enormous expenditure, Government engineers' reports show that actual commerce on the three rivers has decreased from 75 per cent to 95 per cent, and last year their combined 28-mile haul total traffic was less than 10 per cent of that handled by one lake harbor, given in the table heretofore presented, while the ton-mile haul of the three rivers combined is less than one-half of 1 per cent of that handled at the Superior-Duluth Harbor alone. Comparisons between lake traffic with long hauls and deep draft are offered to distinguish inland waterways that carry real freight from rivers, canals, and creeks that only carry appropriations.

OUR OHIO RIVER INVESTMENT OF \$100,000,000.

What justification is offered for an appropriation of \$5,000,000 for the Ohio contained in this bill? Balances in the hands of Government engineers for the Ohio River during 1918 reached \$7,550,000, and yet over one-quarter of the total amount carried in the 1918 bill is also for this one river. After appropriating \$59,016,469 for the Ohio River we may well inquire what results have been reached. Judged by such results, what benefits will be derived from a further estimated expenditure of \$28,265,488 to complete a project heretofore recommended by Army engineers, which additional estimate is reasonably sure to reach forty or fifty million dollars based upon present conditions and past experience?

Out of 54 locks covered by this engineering "project" the first 20 locks are practically completed. These locks reach along the upper Ohio River for a distance of 200 miles, or a little over 20 per cent of the river's length. Traffic in 1916 at the first 10 locks of the completed portion will be found on page 2914 of the 1917 report. Total tonnage passing Lock 1 and originating between Lock 1 and Lock 10, a distance of over 60 miles, is given at 4,392,763 tons. Sand and

gravel hauled about 10 miles reached 2,490,000 tons. "Waste," valued at 15 cents per ton, reached 84,469 tons, leaving 1,818,285 tons of other "traffic," developed after an expenditure of approximately \$50,000,000 along the entire river. Again analyzed, this remaining traffic is found to include 1,762,895 tons of coal, valued at \$2.40 per ton, or 97 per cent of the actual tonnage was coal hauled less than 20 miles. The remaining 56,000 tons, or about 3 per cent of the total officially reported, includes steel and wooden barges, stone, miscellaneous, etc. This commerce was hauled on an average less than 15 miles, or less than one-fourth of the distance covered by the 10 completed locks.

AVERAGE OHIO RIVER HAUL 28 MILES.

Commerce on the entire river is somewhat larger, and the average haul is given by engineers at about 28 miles, but after making allowances for duplication of the same freight, and for sand, gravel, and other miscellaneous items hauled several miles, the results are grossly disproportionate compared with glowing predictions and present enormous expenditures. On the 200 miles of practically completed lock system the average haul is less than one-seventh of the distance now improved by locks and dams, and less than one thirty-fifth of the river's length under "improvement," indicating that no through waterway traffic on the Ohio River is or can be expected, even though the Government spends ten times \$50,000,000 in a hopeless effort to rejuvenate a lost river commerce. A large commerce covered the river a half century ago before one dollar was spent by the Government, but all the locks in existence or in contemplation will not bring back river traffic on the Ohio or on any other river with present methods, excepting to a small extent and where peculiar conditions favor some local industry rather than general public use.

Expressed differently, the Ohio River 28-mile hauled commerce, 95 per cent of which is coal, compared to the 850-mile average haul of Superior-Duluth Harbor, would be equivalent to about 160,000 tons hauled on the Ohio that same distance. Counting duplications and general unreliability of river reports, this probably is far more than the actual ton-mile average. Including interest on the investment and annual maintenance charge, the cost to the Government for furnishing the Ohio waterway in 1916 reached about \$16 per ton, based on a 160,000-ton 850-mile haul. Ninety-five per cent of this commerce was coal, valued at \$2.40 per ton.

COSTLY CANALIZATION.

Government engineers have demonstrated that, backed by an inexhaustible Treasury, the Ohio River can be canalized. With equal confidence they may canalize the Rocky Mountains, moistening the waterway from perpetual snows that crown the crags, reinforced by artesian wells, as proposed by engineers for the Trinity River canalization project, and yet from the standpoint of commercial use and public economy both projects are unprofitable for the country. A 28-mile haul indicates the limited interests served by a \$59,000,000 Ohio River improvement. If any further corroboration of the hope-

lessness of this Ohio River "project" is needed, the following extract, taken from the report of Maj. John Stewart, Army engineer, dated December 22, 1917, filed with the committee, is offered, wherein he states:

There are no municipal water terminals along the Ohio River. All terminal facilities are privately owned and are inadequate to properly provide for water transportation of any magnitude and are not constructed or equipped for joint rail and water transportation.

Again, he says:

The towns and cities have sold the privileges of their water gates for a very low rental—some for nothing. In a number of cases the business of the water carrier has been shut off by the municipalities granting unrestricted franchises to the railroads to the right of way along the river front.

No contributions and no terminals along the Ohio. The Government foots all the bills.

With such information possessed by the engineering department for the past 50 years, we have expended over \$50,000,000 on the Ohio River. Diminishing commerce is less than one-tenth that of one Lake harbor, and with balances of \$7,612,000 on hand, this 1918 bill carries \$5,000,000 more on the advice of Government engineers for a river that has no water terminals and relatively a small actual commerce averaging only 28 miles haul.

OUR MISSISSIPPI RIVER INVESTMENT OF \$250,000,000.

The Government has spent over \$100,000,000 on the lower Mississippi River alone, during which period river commerce has decreased over 95 per cent. Not one single line of boats runs from St. Louis to New Orleans, although it is the finest inland waterway in the world. Several hundred millions more of Government money are likely to be spent on the river, to include a 20,000,000-acre private land reclamation project for "flood control," of which amount \$10,000,000 will be appropriated this year in the sundry civil bill. The lower Mississippi River is no longer cared for by the river and harbor bill, and continuance of appropriations for that part of the river no longer depend upon subterfuges for a pretended navigation. The upper Mississippi project, including the river from the mouth of the Ohio to St. Paul over a stretch of nearly 900 miles, also presents a problem more hopeless, if possible, than that of the Ohio River. From the mouth of the Ohio River to the mouth of the Missouri River on a 200-mile stretch of the Mississippi the Government has spent over \$17,000,000, or at the rate of \$85,000 per mile, and on the 700-mile stretch of the Mississippi from the mouth of the Missouri River to Minneapolis, appropriations have reached \$32,327,499, or total appropriations from Cairo to Minneapolis on the Mississippi River now reach \$50,678,582, apart from \$120,000,000 in round numbers for the lower river. This bill carries \$680,000 more for the upper part of the river in addition to \$2,283,699 on hand and the engineer reports estimate \$25,275,000 more will be required to complete an existing upper-"river project." Judging from past experience, the amount will be raised to \$40,000,000 or more before the "existing project" is completed and others ready to be commenced. No commerce has ever existed between Minneapolis and St. Paul notwith-

standing ambitious predictions of commerce promised by engineers to justify an expenditure of \$2,504,381 for a twin-city water-power project at Government expense. Commerce on the upper Mississippi has diminished about 95 per cent according to estimates furnished by St. Louis authorities which statistics have been quoted repeatedly.

AVERAGE HAUL OF 14 MILES ON THE UPPER RIVER.

During this same period the Government has expended nearly \$50,000,000 or practically the same amount as on the Ohio, with this difference, that while the average haul on the Ohio is about 28 miles, the average haul on the 700-mile stretch of Mississippi River above the Missouri is only 14 miles (p. 2718), or just one-half the haul on the Ohio. By way of further comparison, the 14-mile average haul on the upper Mississippi is one fifty-seventh of the average haul at the little harbor of Ashland, Wis., while the actual commerce hauled on the river in 1916 was not 5 per cent of that hauled at Ashland during the same period. Expressed in another form, the ton-mileage of the upper Mississippi did not exceed one-tenth of 1 per cent of the 1916 commerce of Ashland, which in 1916 reached over 10,000,000 tons, with an average haul of about 800 miles. Expressed in another form again, the 14-mile haul of actual Mississippi River commerce if compared with the 800-mile haul of Ashland, first noted, would reach about 5,000 tons 800-mile haul for the Mississippi compared with 10,076,703 tons 800-mile average haul handled at Ashland. Total cost for Ashland \$644,500, and for the upper Mississippi \$50,678,582. The annual interest cost to the Government on the \$50,000,000 investment on the upper Mississippi, with annual maintenance, reached approximately \$2,500,000. The cost per ton to the Government for furnishing a waterway for a 14-mile haul is apparent. Several Army trucks would have performed the service of hauling river freight much better and at less than 1 per cent of the cost.

ENGINEERS' METHODS OF VALUING COMMERCE IN 1916.

Page 1126 of the Chief of Engineers' report for 1917 states a small decrease occurred in upper Mississippi River commerce for 1916, but "the value increased in one year \$44,636,919." This increase in value indicates a ridiculous system of valuations that is disclosed only by referring to page 2718 of the second volume of same report, wherein "commerce" is itemized. The first item is 41,113 automobiles weighing 43,750 tons valued at \$41,113,000, ferried one mile across the river—and thereby hangs a tale. In 1913 the system of including automobiles ferried across the river to boost traffic was exposed, and it was discontinued in 1914 and 1915. In 1916 it was again renewed by the engineer in charge and approved in the Chief of Engineer's 1917 report. That explains "increased value" of commerce in 1916 over 1915. It never occurred.

Glancing down the itemized commerce report on page 2718 items of live stock, teams and merchandise ferried across the river reached a total of \$12,532,030, which added to the automobile ferriage totaled \$53,645,000, or nearly 60 per cent of the total valuation. An item of

\$40,886,750 contained in the report, hauled 40 miles on a 700-mile stretch of river "improvement," defies analysis because it is "lumped" in one item, but it is noted that 217,000 tons of gravel hauled 10 miles, 303,000 tons of rock hauled 11 miles, 463,000 tons of sand hauled less than 5 miles, 35,000 tons of logs rafted 29 miles, 62,000 tons of brush hauled 14 miles, comprises two-thirds of the upper Mississippi River "commerce" hauled on an average 14 miles. Not one ton of grain was hauled 3 miles, although 4,773 tons of corn and oats were ferried across the river and reported as river "commerce." Not one ton of coal was hauled 20 miles, and yet extravagant predictions have been offered to justify an expenditure by Government engineers of nearly \$50,000,000, wherein grain was to be hauled down the river to St. Louis, and coal from the Ohio River to St. Paul. The only appreciable commerce is made up by adding river ferriage camouflage and Government material used in so-called river improvements.

UPPER MISSISSIPPI IN BETTER CONDITION THAN ANY EUROPEAN RIVER.

In a statement made before the Rivers and Harbors Committee on January 25, 1918, by Col. Keller, Army Engineer in charge of work on different parts of the upper Mississippi and an authority on its present condition, he said that the Mississippi River from St. Louis to the mouth of the Ohio has a depth of from 8 feet to 9 feet, and from there to the mouth of the Mississippi its condition is far better than on any river in Europe. Yet the Mississippi is deserted with its only boat line to St. Paul during three months in the year, scheduled for abandonment in 1918.

Referring to loss of traffic which once existed on the river, Col. Keller said in effect the channel is better to-day than when the river was covered with boats 50 years ago, and, in this opinion, he is confirmed by Col. Goltra, of St. Louis, who appeared before the committee and said the river is not to blame for present conditions, but low railway rates have destroyed river commerce. With \$50,000,000 appropriated in round numbers on the upper river and no appreciable commerce in 1916, the 1917 recommendation of the Chief of Engineers carried \$2,000,000 for the upper Mississippi above the Missouri which was cut down by the committee last year. This bill carries \$500,000 for that same stretch of river in addition to \$1,626,924 on hand. The river channel should be maintained, but extravagant "improvements" in wing dams, of which several hundred have been built, can not be justified at this time for a river that is commercially deserted.

One further river project contained in the pending bill will be briefly discussed, because it represents another kind of gross extravagance.

OUR MISSOURI RIVER INVESTMENT OF \$35,000,000.

If the Ohio River \$100,000,000 project is a commercial failure and the upper Mississippi \$80,000,000 present and proposed expenditure a waterway tragedy, the Missouri River "improvements" for navigation have become a farce that can not be explained, even under our wasteful methods of transacting public business. Government appropriations for the Missouri River already reach \$22,574,591. Of

this amount \$15,793,167 has been appropriated for the 400-mile stretch of river between Kansas City and the Mississippi River. To complete the lower river project \$11,665,000 more will be required according to engineers' estimate, indicating about \$15,000,000 or \$20,000,000 more will be required to complete the present project. After spending over \$20,000,000 on the river, an entire absence of terminal facilities is reported, as on the Ohio, excepting at one point, Kansas City. This bill carries \$500,000 for the Missouri River project, 80 per cent of which is for "improvements." A balance on hand of \$2,079,629 would seem to be sufficient for several years to come, without anything in the pending bill. On page 2766 of the Engineers' reports for 1917 appears a "commerce" statement for the lower Missouri River. Total commerce 211,371 tons, of which 185,092 tons of sand was hauled 1 mile by the owner and 1,879 tons of sand was hauled a little farther, or all about 1 mile on the average, leaving 24,400 tons of miscellaneous "commerce," including railroad ties, wood, coal, etc. No grain was hauled from Kansas City to St. Louis, although the announced purpose of this improvement is to enable grain shippers to avoid excessive railway charges. A few tons of coal were hauled 12 miles. On the river between Kansas City and Sioux City, where \$3,307,057 has been appropriated, the "commerce" for 1916, page 2771 of the 1917 report, is reported at 105,287 tons. Examination develops 104,089 tons is sand hauled by owners 3 miles, and the next largest item is for logs and lumber rafted 25 miles, leaving a few tons in 1916 on this three-million-dollar stretch of river. For such commerce the Government has spent a score of millions along the river, and presumably fifteen to twenty million dollars more are destined to follow according to recommendations of the Chief of Engineers.

RECOMMENDED FOR ABANDONMENT.

Col. Deakyne and Col. Townsend, chairman of the Mississippi River Commission, both recommended the abandonment of the lower Mississippi River project, but were overruled by Gen. Black, their superior officer. Both Deakyne and Townsend are now in France. One further word regarding this remarkable project. Engineers who recommend Government improvements for a nondiscoverable commerce stated the work will also reclaim about 500,000 acres of private lands for private parties along the river. This appears to be the object of the "improvement." On page 1172, report for 1917, is a table of proposed operations by the Chief of Engineers with funds unexpended July 1, 1917. Out of \$1,699,708 on hand \$1,335,128 is to be for revetment; \$50,000 for survey, superintendence, and office; and only \$75,000 for "experimental dredging." Approximately 85 per cent for land protection and 5 per cent for dredging indicates the purpose of the improvement. That this protection is for navigation may well be questioned when, after a half century's improvement by the Government at a cost of over \$15,000,000, commerce only reached several trainloads last year.

SOME COMPARISONS ON REAL AND UNREAL INLAND WATERWAYS.

Fifty thousand dollars are recommended by the Chief of Engineers and given in the pending bill to a group of 10 Ohio harbors, including Cleveland, Sandusky, Ashtabula, and Toledo, which report a

combined commerce of over 75,000,000 tons in 1916, or about the same as the other group of harbors previously cited. Ten times that amount, or \$500,000, in addition to \$22,594,000 heretofore appropriated, are recommended by the Chief of Engineers and given in the pending bill to the Missouri River, which reports a commerce of 24,400 tons in 1916. One hundred times \$50,000, or \$5,000,000, in addition to \$59,000,000, heretofore appropriated, are recommended by the Chief of Engineers and given in the pending bill to the Ohio River, which reports an insignificant commerce apart from coal hauled 28 miles and not a single proper wharf or terminal on the 975 miles now under improvement. Some day Congress will awaken to the fact that waterway waste and extravagance reaching hundreds of millions of dollars in the aggregate has occurred without practical value or public use of the "improvements."

LARGE APPROPRIATIONS DO NOT BRING COMMERCE.

The foregoing data carries conclusive evidence that large appropriations do not bring commerce to inland waterways or retain former river traffic, although interested localities continually demand extravagant expenditures and are supported in such demands by Army engineers.

River commerce on the Mississippi, Missouri, and nearly every other river has decreased from 90 to 95 per cent, compared with river commerce of 50 years ago, before river "improvements" were ever begun. Railway rates, superior conveniences for handling and shipping by rail, and other factors contribute to this loss in traffic notwithstanding expenditures by the Government for improvements totaling several hundred million dollars have been made on these same rivers during the past half century in rapidly increasing amounts.

Inland waterway organizations, of which many exist, demand huge appropriations for canals and rivers and pretend to ascribe present congestion in railway traffic to failure to improve interior waterways. The Mississippi River has the finest channel of any river in the world from St. Louis to New Orleans and to the Gulf, a distance of 1,200 miles or more. Practically no river commerce exists. The upper Mississippi and Ohio are in better shape than ever before, but commerce continually decreases. On the Rhine in Germany, with a shallow stream, the annual commerce before the war averaged about 40,000,000 tons. Germany owns her railways which is a key to the situation. In this country out of 4,468 miles of canals built in the United States 2,444 miles, or over 50 per cent, had been abandoned prior to 1906; and according to the report of the Inland Waterways Commission, one-third of mileage abandoned is in the State of Pennsylvania. The record of abandoned canals has increased during the past 10 years, but efforts to unload bankrupt private waterways onto the Government were never more promising and sure to occur than at this time when proposed as war measures.

A FEW CANAL INVESTMENTS.

Approximately \$150,000,000 has been spent by New York State in an effort to rejuvenate the Erie Canal and to test a 350-mile waterway, built and located under the most advantageous conditions. In-

creased depth and better facilities now exist for relieving railway congestion between the Great Lakes and New York Harbor, but excellent authority, including members of the legislature who voice their distrust publicly, waterway authorities, and competent engineers all express serious doubts of any commercial use or value of this \$150,000,000 canal under existing railway conditions. An expenditure by the Government of \$7,646,647 for the Hennepin Canal in Illinois, with an annual maintenance and operating expense to the Government of \$87,083, in 1916 produced 9,392 tons of gravel, grain, clam shells, earth, rock, etc., hauled an indefinite distance on the short canal. Counting interest on the investment it cost the Government approximately \$34 per ton in 1916 to furnish a short waterway for this kind of commerce hauled on the average presumably a dozen miles. Such projects can not be justified or the expenditures excused. Yet it was predicted before construction that this waterway would save shippers \$20,000,000 annually in freight charges. Another example of Government canal ventures is found on the Muscle Shoals (Tennessee River) project, where Government engineers have recommended \$18,700,000 for navigation and incidental water-power improvement in addition to over \$4,000,000 already expended on a 26-mile project with several trainloads reported annually of miscellaneous traffic which already costs the Government for furnishing the waterway probably as much or more than the value of insignificant commerce floated.

UNDERESTIMATES ON INLAND-WATERWAY WORK.

A proposed inland-waterway project along the Atlantic coast and Gulf that canalizes marshes, sounds, creeks, and dry land, at a possible expense to the Government of from \$100,000,000 to 10 times that amount, depending on depth, is being vigorously urged upon Congress and upon war boards as a war measure. This bill contains \$500,000, because of mistaken estimated expense on one section of a canal or waterway from Norfolk to Beaufort. After appropriations of \$3,244,400 to June 30, 1917, in addition to the half million dollars of underestimates, \$2,397,180 more will be required for this canal waterway that lost 45 per cent of its small commerce between 1913 and 1916, according to page 542 of the 1917 Engineers' report.

Speaking of Army Engineers' estimates, the 1918 bill carries \$100,000 extra for a 1-mile project at Government expense for Trenton, N. J. Estimates several years ago, when project was adopted by Congress, were given at \$164,000, which seemed to be a generous gift for 1 mile of improved river. Present estimates indicate about \$400,000 will be needed from the Government for this 1-mile project, which includes removing channel rock at \$21.50 per yard in order to make the river crossing at Trenton open to something larger than continental rowboats.

Hundreds of millions of dollars will be required to complete river and canalization projects now being conducted with the approval of Government Engineers and hundreds of millions or possibly billions more will be required to dig inland waterways and canals adopted or waiting adoption. Col. C. McD. Townsend, recently chairman of the Mississippi Commission, proposed that all expenditures on rivers

apart from maintenance, save on the Ohio and Upper Mississippi, remain in statu quo until some one stream has been utilized so as to justify expenditures. Canals, rivers, and questionable inland-waterway improvements are of doubtful value under modern conditions of transportation.

A PECULIAR TEST UNDER STRANGE CONDITIONS.

A proposition to determine the utility of at least one river is to be handled by an inland waterway committee branch of the Council of National Defense. According to statements before the River and Harbor Committee by Col. Keller, an Army Engineer, and Col. Goltra, who is national Democratic committeeman from Missouri and the proposed fleet lessee, the Government of the United States has placed \$3,360,000 in the hands of a waterway committee with which to build several steamers of new experimental design and a dozen new barges for a trial test on the upper Mississippi River. Why build a fleet when one boat and three or four barges could test river traffic, particularly as no commercial line is successfully maintained on the Mississippi River to-day, and a once magnificent commerce has entirely disappeared. Only two or three members of this new waterway committee are reported, outside of publicity bureaus, to have more than a superficial knowledge of commercial river traffic as distinguished from rock, gravel, sand, and concrete material used by Government contractors in river work. It is further noted that not one member of the new committee authorized to expend \$3,360,000 in boat construction claims to have made a financial success of river transportation. At the hearings this question was specifically asked without any enlightenment being given the committee.

A LESSEE IS SELECTED IN ADVANCE.

It is further noted that before any test is made the Government plans to lease to Col. Goltra the \$3,360,000 fleet of boats for his steel factory ore-reducing plant at St. Louis, and a proposed contract is to be executed with him by the Government for 20 years with right by him to purchase the boats from the Government at any time at appraised value. This value he estimated before our committee at 50 per cent of construction cost or only \$1,700,000, due to loss to the Government because of present war construction high prices. Annual interest payments of not to exceed 4 per cent per annum are also to be agreed upon. It is further noted that if the new boat line fails to make commerce profitable for Col. Goltra's steel operations under these unusually favorable conditions at Government expense, he believes the fleet will be "scrapped" and further expenditures on the river for improvements may then be abandoned, according to the testimony. For more definite understanding of the proposed contract and river conditions, the minority refers to the testimony of Col. Keller, Army Engineer, and Col. Goltra, given before the River and Harbor Committee, January 25, 1918.

According to the testimony, the upper Mississippi River channel is of sufficient depth. It is further noted that although Col. Goltra's only experiment in Mississippi River transportation resulted in a

loss of \$10,000 on a single trip last year, that he has no doubt of success of this experiment—providing \$3,360,000 is spent by the Government for boats for his particular use. On his \$10,000 deficit trip he had free use of the Government flagship *Nakomis*, which served to decrease the risk and loss that otherwise would have ensued.

A \$3,360,000 Government donation to provide a steel concern on the Mississippi with a fleet of boats has its counterpart in the \$18,700,000 proposed Government contribution to private water-power interests at Muscle Shoals on the Tennessee while both proposals ostensibly carry the approval of the Chief of Engineers acting on behalf of the Government. War necessity and river development for commercial needs are offered in attempted justification of both propositions.

THE KEY THAT UNLOCKS THE RIVERS.

Official statistics from Government engineer reports have been set forth to show the colossal waste and hopeless results reached on our three greatest rivers, after 50 years of "improvement." No other results could have been reasonably expected. A large river traffic of 50 years ago has been wiped out by railway competition and by changed business conditions. Practically the same situation is disclosed on rivers generally throughout the country.

Constructive efforts to promote commerce on our inland waterways involves fixing railway rates to prevent roads from underbidding water transportation companies on heavy bulk freight.

Improved terminals, modern devices for loading and unloading, coordination of railway and waterway traffic, both physically and through joint rates, are all desirable, but are more ornamental than useful under existing conditions, as evidenced by expensive but useless terminal improvements along the upper Mississippi.

A first requirement is to control railroad rates so waterway traffic can live. Without that change in transportation conditions, failure is inevitable. We are confronted with threadbare promises by publicity agents and beguiled with illustrations of boosting river fleets flying flags, when every test thus far for any continuous river haul has met with financial failure. After a half century of river-traffic camouflage, we awake to discover that nearly all river and canal commerce has disappeared, streams are deserted, and former waterway craft have been burned for firewood.

The proposed test by the Shipping Board on the Mississippi does not invite confidence because of men in charge whose inspiration gathered from waterway associations has been mistaken for experienced judgment. Neither does a single politically tinged unbusinesslike contract between the Government and a self-constituted agent, unfamiliar with successful river transportation, give any encouragement. After squandering three millions and a half on a favored-contract proposal we will discover that natural business laws remain unchanged and that the railroad rate problem must be met and squarely solved before general river traffic can be successfully resumed.

RIVER BUSINESS MUST BE MADE PROFITABLE.

Continued waste of money in extravagant river improvements is of no more value than constant burnishing of an old watchcase from

which the works have been extracted. Works must be replaced and the spring wound up before the watch will go, and boats must be built by business men with a profitable river business in sight before river commerce can be successfully renewed.

The key which will start the works is found in controlled and higher railway freight rates at water competing points. Such reform in railway rate adjustments will meet with opposition from favored communities, but river commerce can only follow a proper adjustment of rates.

Until that time comes it is pure waste to squander millions of public money annually in burnishing empty watchcases.

Army Engineers' reports generally advocate new river improvements on the ground that they will bring down freight rates, and as an evidence of success such reports frequently claim that railway freight rates have been reduced, even though the "improved" stream is not utilized. Bludgeoning railways with Government funds through fictitious water competition has destroyed river traffic. Any reduction in railway rates below actual cost of carriage necessarily drives boats out of business, throws an added rate burden on interior points, and is a selfish, destructive policy. If not enjoying reasonable rates, legal remedy is afforded by State and interstate commissions and not by wasteful appropriations from the Federal Treasury for deserted waterways.

INSIGNIFICANCE OF WASTED MILLIONS.

In these days when Congress is appropriating many billions of dollars annually, it may be difficult to fix attention on a few insignificant millions which are annually wasted on uncommercial waterways, but the action of this committee in postponing action on several worthy new projects because of war conditions while accepting many wasteful old projects recommended in the 1918 bill by the Chief of Engineers, presents a novel legislative situation.

Existing uncommercial projects in this bill, several of which have been mentioned, receive practically half of the bill, much of which could profitably be saved, or if need be diverted to worthy harbor projects now urging increased depth.

As long as an antiquated custom is continued of granting wasteful appropriations for existing projects when recommended by Army engineers no relief will be had. Such policy has largely contributed to a waste of over one-half of \$900,000,000, heretofore spent by the Government on rivers and harbors. All projects must be recommended by Army engineers according to present rules, and this year the committee has refused to include any new projects not recommended by the War Department for war purposes. All appropriations recommended by engineers, however, are included in the bill because so recommended. No excuse can be offered for this last proposition when it is demonstrated after 40 years of experimentation that theoretical officers ignore the only justification offered for Government waterway appropriations—commercial use, present or prospective.

A political commission recommended by Congress in the 1917 bill affords little promise of expert aid or a practical businesslike administration of waterway transportation or in the development of water-

ways actually needed for public use. A \$500,000,000 revolving fund contained in the new railway bill, from which the President may acquire, operate, and use canals, boats, barges, and tugs on canals and coastwise waterways, invites enormous extravagance depending upon the agencies employed to carry out such powers, and at most it is a temporary war expedient not founded on any thorough-going permanent plan of inland waterway use. Fundamental change in method is necessary through a nonpolitical department placed in control of public works, similar to the Interstate Commerce Commission, which will supercede theoretical engineers on the one hand and withstand political or official pressure on the other. An early return to a single appropriation committee as recommended by the President with the ultimate aim of a public-budget system is also imperatively needed by our Government, which now enjoys the distinction of being the only Government without a budget system.

A MILLION DOLLAR COURTESY ASKED.

Increases in the 1918 bill recommended by the War Department were strenuously urged for certain projects by committee members, and on the ground of courtesy were given many hearings. Courtesy involving unnecessary public expense is indefensible and particularly so during the stress of war. Mobile Harbor, one of those projects, has received to date from the Government \$7,954,094 (p. 2475, 1917 report). Further deepening of the harbor at an expense of \$1,092,000 and \$165,000 for annual maintenance was pressed hard on the engineering department and upon the committee in 1917. As a result a dangerous and illogical precedent was adopted just prior to reporting the 1917 bill of approving increased depth at Mobile, but making no appropriation therefor. Such practice invited untold embarrassment and complications quickly followed. The Chief of Engineers this year recommended \$260,000 for further improvement and maintenance of Mobile Harbor, which promises large industrial development in the future, but that amount was all that could be profitably expended during the year according to the engineers' report.

Repeated hearings and many discussions devoted to this one project were had before the River and Harbor Committee in an effort by its advocates to increase the appropriations for Mobile Harbor from \$260,000, the amount recommended, to \$860,000 for 1918. The Shipping Board, Emergency Fleet Board, Army Engineers' Board, and the River and Harbor Committee were importuned on the subject. At the final hearings on February 12, and February 28, and March 1, Col. Newcomer, on behalf of the Board of Engineers, in opposition to the proposal stated to the committee: First, the increase could not be justified for "war purposes" by the War Department; second, no dredges were available to complete the project in one year as proposed; third, no private dredges could be hired to do the work at legal limitations of 25 per cent over Government cost fixed by Congress; fourth, all shipbuilding facilities are sorely taxed to provide ships for troops and supplies, and it would be unwise and against public needs to build an expensive dredge costing 50 per cent more than usual this year, or to divert labor for that purpose; fifth, to try to complete the project in a year and a half would cost the Government \$2,500,000, or over \$1,000,000 more than

officially estimated; sixth, that nothing distinguished Mobile Harbor from many other waterway projects awaiting deepening.

Page 836 of the 1917 engineers' reports disclosed 2,392,442 tons of commerce in 1914 and 1,673,020 tons in 1916 for Mobile, or a loss of over 25 per cent in two years "caused by the European war," but the increased appropriation was strenuously and repeatedly pressed upon committee and possibly would have been agreed to as a matter of courtesy but for the argument that such action might defeat the passage of the bill. It will again be urged by strong local influences before the House and elsewhere notwithstanding the above facts, and is an evidence of the present system of making waterway appropriations, when such influences are permitted to govern congressional action irrespective of commercial needs or vastly increased expense involved.

TWO "WAR PROJECTS" BY COURTESY.

Long Beach Canal, in California, a new project, was also strenuously pressed upon the committee. Several hearings were had and repeated consideration given to the project. In like manner the Shipping Board, Emergency Fleet Corporation, War Industries Board, Engineers' Office, and River and Harbor Committee were bombarded with letters and arguments to prove a canal to Los Angeles Harbor entrance from Long Beach but unrelated to the Long Beach Harbor entrance, was a war necessity. An able Senator was called in to give untechnical information to the committee, and able representatives did likewise. Appropriations aggregating \$6,107,250 indicate Los Angeles has not been neglected in the past, and the present Long Beach harbor has a greater depth and is closer to the sea when compared with this 20-foot canal proposed. Only by a wide stretch of imagination could the project be called a war measure over scores of other projects awaiting adoption. Finally on February 15 the engineers capitulated on Long Beach Canal because of a telegram approved by the War Industries Board wherein it was stated that an inside canal of from 16 to 18 feet depth is imperatively needed as a war measure, whereas a direct short channel to the sea of 23 feet depth at high tide is now continuously available with a nominal dredging cost. Stones are worn away by constant dropping of water, and canals are dug by employment of similar methods.

Crescent City Harbor is another project on the Pacific Coast that was repeatedly pressed for passage as a war measure, as a matter of courtesy. It is a project where private interests are alleged to be especially served, according to letters received by committee members, and although contribution is offered, the project seemingly has no priority rights over many other projects where equal timber supply and larger contributions are offered. Yet after timber shipments for shipbuilding were found to be doubtful value as a war argument, the War Industries Board was again called in to persuade engineers that chrome ore will be found near Crescent City. It is thus necessary to build a jetty at Crescent City to help win the war, because of chrome ore deposits which may be used sometime in the future after the jetty is completed. In excuse for the Crescent City Harbor it

may be said that the pending bill carries no appropriation, and the expressed purpose is to permit locality interests to spend \$200,000. However, next session with an adopted project, Crescent City will be entitled to equal consideration with Mobile and other adopted projects, and Government aid will then be invoked as a matter of right and courtesy.

In a bill wherein public or commercial necessity is an element for inclusion of items, it is certain that many important waterway projects do not receive equal consideration when a dozen to 15 committee meetings are devoted to three relatively unimportant measures, largely on the ground of courtesy.

TREASURY COURTESIES THROUGH REHEARINGS.

The Tennessee River has received \$11,975,217 from the Federal Treasury, or about the same as the Black Warrior River, its close neighboring stream. A 1918 balance on hand of \$1,087,743 and \$343,000 carried by this bill are all on the debtor side of the Tennessee River ledger, while a comparatively insignificant commerce credit exists after deducting sand, logs, duplications, and a 20-mile ferriage of sealed box cars. No river terminal facilities are furnished by localities, and the locks and dams along the river, with equal public necessity, might adorn the banks of the Kentucky, Kalamazoo, or Ouichita.

By way of camparison, past Government expenditures on the Tennessee are larger than the combined totals for three Wisconsin harbors, heretofore mentioned, which harbors handled 70,000,000 tons for an 800-mile haul in 1916. Government engineers are building costly locks and dams along the Tennessee that will furnish conveniences for private water-power exploitation similar to the \$18,700,000 private-power project recommended at Muscle Shoals on the same river. Locks and dams are being constructed on the Tennessee, Cumberland, Black Warrior, and many other rivers, built and maintained at enormous Government expense without any present or prospective commercial use, and in an apparent effort to justify these expenditures, engineers have occasionally recommended that local interests contribute a small fraction of the expense. On the upper Cumberland Col. Newcomer made a brave effort in this direction by recommending a contribution by local interests of one-half of that project or \$2,250,000. Ten distinguished men protested against any local contribution, according to the official report, and the Board of Engineers surrendered unconditionally.

Representatives recently appeared before the River and Harbor Committee denouncing a small local contribution imposed by engineers for flowage damages caused by the construction of a \$500,000 lock in the Tennessee, which river has received about \$12,000,000 from the Government without any local contribution or terminal facilities. No new conditions in the Tennessee dam project are claimed to have arisen since contribution was imposed, but on February 16, after a brief hearing and on request, the River and Harbor Committee directed Government Engineers to hold a rehearing or reexamination to ascertain if the contribution could not be waived. Courtesy is an easy way to the Federal Treasury, and engineers are expected again to capitulate in their efforts to compel even insignifi-

can contributions from local interests. Constant dropping of water on the rock digs canals at Long Beach, builds jetties at Crescent City, and constructs power dams at Government expense without contribution on the Tennessee and Cumberland Rivers.

In European countries and on the Pacific coast some system of contribution is generally imposed, but easy ways to spend money wastefully will be traveled as long as the present system of making waterway appropriations continues.

PUBLIC HEARINGS ADOPTED.

Progress has been made in the conduct of committee hearings. Formerly no record was kept, interested parties struggled for recognition and for priority, and the committee prepared such bills without the attendance of the Government engineers or the benefit of their advice possibly influenced by nonexpert arguments, as evidenced by many indefensible projects now under improvement. The present committee had stenographic reports of public hearings, and has been aided by the presence of Col. Newcomer, an able officer of the Board of Army Engineers. Publicity invites better scrutiny and helps to keep out many uncommercial projects and to improve the bill.

The minority report invites attention to an unexpected tribute to the pending bill. Through legislative courtesy a waterway lobby's secretary was permitted to place a long sophistical essay in the Congressional Record of February 23. This superficial treatise comes from one who recently demanded that Congress appropriate \$100,000,000 annually for "a policy, not a project." Criticism of the Secretary of War, from such sources, for trying to confine recommendations to actual commerce and war needs, is a striking indorsement of one especially meritorious feature of the pending bill.

Providing this measure is loaded down with amendments or new projects, either at this end of the Capitol or elsewhere, following time-honored precedents, founded on legislative courtesy, it ought to be defeated because of inherent weakness, and a lump-sum appropriation of \$15,000,000 placed in the hands of the engineers for present use. They are responsible for recommendations of \$5,000,000 or more, as hereinbefore set forth, that might be eliminated with profit from the bill; but, bad as it is shown to be in specific cases, conditions would be infinitely worse if Congress depended upon impetuous waterway organizations or selfish local interests for guidance.

The minority report has pointed out a few instances from among many, of what are contended to be items of useless extravagance, although the greatly reduced total appropriated contains proportionately less waste for obvious reasons. This bill also includes certain waterway improvements and maintenance items essential to large commercial needs and more important to needs required for the conduct of the war, such as for the harbors of New York, Philadelphia, Norfolk, and other real waterways. These improvements should not be delayed, and while it may be impossible to strike from this omnibus bill any of the objectionable items, the right to do so or to support a reduced substitute bill, is reserved; otherwise the majority report is concurred in.

JAMES A. FREAR.

RIVERS AND HARBORS APPROPRIATION BILL.

JULY 2, 1918.—Ordered to be printed.

Mr. SMALL, from the committee of conference, submitted the following

CONFERENCE REPORT.

[To accompany H. R. 10069.]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 10069) making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its amendments numbered 6, 7, 8, and 9.

That the House recede from its disagreement to the amendments of the Senate numbered 3 and 4, and agree to the same.

Amendment numbered 5:

That the House recede from its disagreement to the amendment of the Senate numbered 5, and agree to the same with an amendment as follows:

Strike out the language in the proposed amendment; also strike out the period at the end of line 20, page 18, insert in lieu thereof a colon, and add the following words: *Provided, That in estimating the cost of doing the work by Government plant, including the cost of labor and materials, there shall also be taken into account proper charges for depreciation of plant and all supervising and overhead expenses and interest on the capital invested in the Government plant, but the rate of interest shall not exceed the maximum prevailing rate being paid by the United States on current issues of bonds or other evidences of indebtedness; and the Senate agree to the same.*

Amendment numbered 10:

That the House recede from its disagreement to the amendment of the Senate numbered 10, and agree to the same with an amendment as follows:

In the proposed amendment change the number of the section from 9 to 8, and strike out the word "be," at the beginning of the twentieth line, and insert in lieu thereof the word *being*; and the Senate agree to the same.

Amendment numbered 11:

That the House recede from its disagreement to the amendment of the Senate numbered 11, and agree to the same with an amendment as follows:

Change the number of the section from 10 to 9; and the Senate agree to the same.

The committee of conference have been unable to agree on the amendments of the Senate numbered 1 and 2.

JNO. H. SMALL,
CHAS. F. BOOHER,
C. A. KENNEDY,

Managers on the part of the House.

DUNCAN U. FLETCHER,
JOS. E. RANSDALL,
KNUTE NELSON,

Managers on the part of the Senate.

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE.

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 10069) making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, submit the following written statement explaining the effect of the action agreed upon:

The rivers and harbors bill as it passed the House carried cash appropriations in the sum of \$21,427,900, and one continuing contract authorization in the sum of \$82,700. The amount added by amendment in the Senate was \$2,344,000 in cash appropriations, making the total of the bill as it passed the Senate \$23,771,900 in cash appropriations and a continuing contract authorization for \$82,700. As a result of the conference the amount involved in the Senate amendments has not been changed. One amendment, however (No. 1), involving an increase of \$140,000, has not as yet been agreed to.

The following statement shows the action taken by the conference on each of the Senate amendments:

ACTION OF CONFERENCE.

Amendments Nos. 1 and 2, page 8: Mobile Harbor and Bar, Ala. Items increase amount appropriated in House bill for improvement work from \$200,000 to \$340,000. The committee of conference have been unable to agree.

Amendment No. 3, page 13: Fox River, Wis. Item eliminates language in House bill appropriating \$22,500 for maintenance and improvement work and provides that the funds shall be applied to maintenance work only. House conferees recede.

Amendment No. 4, page 14: Los Angeles Harbor, Cal. Item adopts new project for the construction of a channel through the West Basin into the southwestwardly arm to the site of a proposed large floating dry dock and appropriates the full estimated cost of said channel. House conferees recede.

Amendment No. 5, page 18: Section 4, providing that no contracts for river and harbor work shall be entered into hereafter if the contract price is more than 25 per cent in excess of the estimated cost of doing the work by Government plant. Item provides that overhead expenses, depreciation, and interest on capital invested properly chargeable to such work shall be taken into consideration in estimating the cost of executing the work by Government plant. House conferees recede with an amendment changing the phraseology and specifically setting forth that the rate of interest charged on the cost of Government plant shall not exceed the maximum prevailing rate being paid by the United States on current issues of bonds or other evidences of indebtedness.

Amendment No. 6, page 18: Pollution of navigable waters of the United States. Item adds new section making it unlawful to dis-

charge or deposit from any source whatever any free acid or acid waste in any form into any navigable water of the United States or into any tributary of any navigable water above tidewater, and provides penalties to be applied on conviction for violation of the provisions of this section. Senate conferees recede.

Amendments Nos. 7, 8, and 9, pages 19, 20, and 21: Items renumbering sections of House bill. Senate conferees recede.

Amendment No. 10, page 22: Modification and readjustment of terms of uncompleted contracts for work of river and harbor improvement. Item adds new section providing that if the Secretary of War shall determine that contracts for work of river and harbor improvement entered into prior to April 6, 1917, and uncompleted, have become inequitable and unjust on account of increased costs of material and labor and other unforeseen conditions arising out of the war, he is authorized to modify and readjust the terms of said contracts in a just and equitable manner, such modifications and readjustments to apply only to work under said contracts remaining to be done hereafter, and any such sum as may be necessary to provide for the increased cost of the contracts due to said modifications and readjustments, not exceeding the sum of \$2,000,000, is appropriated by the new section. It is also provided that as a condition of any such contract being so modified that the Secretary of War shall have the right, at the end of any fiscal year, until the contract is completed, to make such further modifications as in his judgment shall be advantageous to the United States and just to the contractor. House conferees recede with verbal amendment, substituting the word "being" for the word "be" in line 10, page 23; and changing the number of the section.

Amendment No. 11, page 23: Item adopts the following section:

SEC. 10. That hereafter when the expenses of persons engaged in field work or traveling on official business outside of the District of Columbia and away from their designated posts of duty are chargeable to appropriations of the Engineer Department, a per diem of not exceeding \$4 may be allowed in lieu of subsistence when not otherwise fixed by law.

House conferees recede, with an amendment changing the number of the section.

JNO. H. SMALL,
CHAS. F. BOOHER,
C. A. KENNEDY,

Managers on the part of the House.



[PUBLIC—No. 200—65TH CONGRESS.]

[H. R. 10069.]

An Act Making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums of money be, and are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to be immediately available, and to be expended under the direction of the Secretary of War and the supervision of the Chief of Engineers, for the construction, completion, repair, and preservation of the public works hereinafter named:

Boston Harbor, Massachusetts: For maintenance, \$40,000.

Pollock Rip Shoals, harbor of refuge at Nantucket, New Bedford and Fairhaven Harbors, Fall River Harbor, and Taunton River, Massachusetts: For maintenance, \$15,000.

Providence River and Harbor, Pawtucket River, Newport Harbor, harbors of refuge at Point Judith and Block Island, entrance to Point Judith Pond, and Great Salt Pond, Block Island, Rhode Island: For maintenance, \$10,000.

Stonington and New London Harbors, Connecticut; Pawcatuck River, Rhode Island and Connecticut; and Mystic and Thames Rivers, Connecticut: Continuing improvement of Pawcatuck River, \$2,500.

Connecticut River above and below Hartford, Connecticut: Continuing improvement and for maintenance below Hartford, \$15,000.

Duck Island, Branford, New Haven, Milford, Bridgeport, Southport, Norwalk, Five Mile River, Stamford, and Greenwich Harbors, Westport Harbor and Saugatuck River, breakwaters at New Haven, and Housatonic River, Connecticut: For maintenance, \$22,000.

East River, New York: Continuing improvement, \$2,200,000. And the Secretary of War is hereby directed to prosecute the work of improvement with a view to securing a depth of forty feet in the channel through East River and Hell Gate as soon as practicable.

Hudson River Channel, New York Harbor, New York: Continuing improvement, \$200,000.

Burlington Harbor, Vermont; Plattsburg and Port Henry Harbors, New York; and Narrows of Lake Champlain, New York and Vermont: Continuing improvement of Narrows of Lake Champlain, \$200,000.

New York Harbor, New York: For maintenance and for continuing improvement of channel between Staten Island and Hoffman and Swinburne Islands, \$75,000.

Newtown Creek, New York: For maintenance, \$15,000.

Mattituck Harbor, New York: For maintenance, \$5,000.

Keyport and Shoal Harbors, Woodbridge, Cheesequake, Matawan, and Compton Creeks, Elizabeth, Raritan, South, and Shrewsbury Rivers, and Raritan Bay, New Jersey: For maintenance, \$10,000.

Delaware River, Pennsylvania, New Jersey, and Delaware: Continuing improvement and for maintenance from Allegheny Avenue,

Philadelphia, to the sea, \$1,100,000; completing improvement above Lalor Street, Trenton, \$150,000; in all, \$1,250,000.

Schuylkill River, Pennsylvania: Continuing improvement, \$300,000. Cold Spring and Absecon Inlets, Absecon and Tuckerton Creeks, and Toms River, New Jersey: For maintenance, \$20,000.

Wilmington Harbor, Delaware: For maintenance, \$50,000.

Waterway on the coast of Virginia: For maintenance, \$1,000.

Baltimore Harbor and Channels, Maryland: Continuing improvement and for maintenance, \$300,000.

Rockhall, Queenstown, Claiborne, Tilghman Island, Cambridge, and Crisfield Harbors. Elk and Little Elk, Chester, Corsica, Chop-tank, Tuckahoe, Warwick, La Trappe, Tred Avon, Wicomico, Manokin, and Pocomoke Rivers, Slaughter, Tyaskin, and Broad Creeks. Twitch Cove and Big Thoroughfare River, and Lower Thoroughfare, Deal Island, Maryland; Nanticoke River (including Northwest Fork), Delaware and Maryland; and Broad Creek River, Delaware: For maintenance, \$3,000.

Potomac River, at Washington, District of Columbia, at Alexandria, Virginia, and at Lower Cedar Point, Maryland; Anacostia River, District of Columbia; Occoquan, Aquia, Upper Machodoc, and Nomini Creeks, Virginia: For maintenance, \$11,000.

Norfolk Harbor and Channels, Virginia: Continuing improvement and for maintenance, including channel to Newport News, \$1,940,000.

James, Nansemond, Pagan, and Appomattox Rivers, Virginia: For maintenance and for completion of the diversion channel at Petersburg. \$50,000.

Waterway from Norfolk, Virginia, to Beaufort Inlet, North Carolina: Continuing improvement, \$500,000: *Provided*, That the Secretary of War may, in his discretion, make such minor changes in the location of the waterway as he may deem advisable in the interests of navigation.

Manteo Bay, Scuppernong, Pamlico, Tar, South, Bay, Neuse, and Trent Rivers, Fishing, Contentnea, Swift, and Smith Creeks, and waterway connecting Swan Quarter Bay with Deep Bay, North Carolina: For maintenance, \$19,200.

Beaufort and Morehead City Harbors, Beaufort Inlet, waterway from Pamlico Sound to Beaufort Inlet, waterway connecting Core Sound and Beaufort Harbor, and inland waterway Beaufort to Jacksonville, North Carolina: For maintenance, \$13,000.

Northeast, Black, and Cape Fear Rivers, North Carolina: For maintenance, \$42,000; continuing improvement of Cape Fear River above Wilmington, \$40,000; in all, \$82,000.

Winyah Bay, Waccamaw, Little Peedee, and Great Peedee Rivers, South Carolina: For maintenance, \$50,000; continuing improvement of Winyah Bay, \$50,000; in all, \$100,000.

Waterways between Charleston and Alligator Creek (opposite McClellanville), South Carolina: For maintenance, including branch to Morrisons Landing, \$5,000.

Charleston Harbor and Channels, South Carolina: Continuing improvement and for maintenance, \$110,000; for improvement to provide a channel forty feet deep and one thousand feet wide, extending from the sea to the Charleston Navy Yard, \$1,500,000: *Provided*, That this work shall not be undertaken until the proposed new dry

dock at this navy yard, carrying a depth of forty feet of water over the blocks, has been authorized; in all, \$1,610,000.

Savannah Harbor, and Savannah River, below, at, and above Augusta, Georgia: For maintenance, \$100,000.

Sapelo and Darien Harbors, Cowhead and Satilla Rivers, and Fancy Bluff Creeks, Georgia; and Saint Marys River, Georgia and Florida: For maintenance, \$4,000.

Altamaha, Oconee, and Ocmulgee Rivers, Georgia: Continuing improvement and for maintenance, \$40,000.

Brunswick Harbor, Georgia: For maintenance, \$20,000.

Indian River, Saint Lucie Inlet, Miami Harbor (Biscayne Bay), and Harbor at Key West, Florida: For maintenance, \$20,000.

Key West Harbor, Florida: For improvement by deepening to a depth of twenty-six feet where necessary and by removal of what is commonly known as the "Middle Ground" to a width of eight hundred feet, in accordance with the report submitted in House Document Numbered One hundred and eighty-five, Sixty-fifth Congress, First session, \$150,000: *Provided*, That authority to enter into contract in an amount not to exceed \$232,700, the full amount of the estimate, if satisfactory bids are received, or to purchase, contract, or hire a suitable dredging plant, and do the work therewith, is hereby given, if it is found that an advantageous contract can not be made.

Kissimmee, Caloosahatchee, Orange, Anclote, Crystal, Withlacoochee, and Suwannee Rivers, Charlotte Harbor, Sarasota Bay, and Clearwater Harbor and Boca Ceiga Bay, Florida: For maintenance, \$4,000.

Tampa and Hillsboro Bays, Saint Petersburg Harbor, Hillsboro and Manatee Rivers, Florida: For maintenance, \$20,000; continuing improvement of Hillsboro Bay, \$300,000; in all, \$320,000.

Removing the water hyacinth, Florida: For the removal of the water hyacinth from the navigable waters in the State of Florida, in so far as it is or may become an obstruction to navigation, \$8,000.

Carrabelle Bar and Harbor, Apalachicola, Saint Joseph and Saint Andrews Bays, Apalachicola and Chipola Rivers, and channel from Apalachicola River to Saint Andrews Bay, Florida; Flint River, Georgia; and Chattahoochee River, Georgia and Alabama: For maintenance, including the cut-off, Lee Slough, lower Chipola River, and upper Chipola River from Marianna to its mouth, \$9,000.

Holmes and Blackwater Rivers, Florida; Choctawhatchee, Escambia, and Conecuh Rivers, Florida and Alabama; the narrows in Santa Rosa Sound, and Pensacola Harbor, Florida: For maintenance, \$17,000.

Mobile Harbor and Bar, and channel connecting Mobile Bay and Mississippi Sound, Alabama: For maintenance, \$160,000; continuing improvement of Mobile Harbor and Bar, \$340,000; in all, \$500,000.

Gulfport Harbor, Mississippi: Continuing improvement and for maintenance of anchorage basin at Gulfport and channel therefrom to the anchorage or roadstead at Ship Island, and for the improvement and maintenance of channel at Ship Island Pass, \$80,000.

Pascagoula, Wolf, Jordan, Pearl, and East Pearl Rivers, and Biloxi Harbor, Mississippi: For maintenance, \$15,000.

Passes at the mouth of the Mississippi River: Continuing improvement and for maintenance, \$1,700,000.

Waterway from the Mississippi River to the Sabine River, Louisiana: The project for the improvement of the section from the Mermentau River to the Sabine River, Louisiana and Texas, is hereby modified in accordance with the report submitted in House Document Numbered Nine hundred and nineteen, Sixty-fifth Congress, second session, and subject to the conditions set forth in said document.

Bayous Vermilion, Nezpique, des Cannes, Plaquemine Brule, and Queue de Tortue, Mermentau River, and Calcasieu River and Pass, Louisiana: For maintenance, including channel, bay, and passes of Bayou Vermilion, and tributaries of Mermentau River, \$5,000.

Removing the water hyacinths, Alabama, Mississippi, Louisiana, and Texas: For the removal of the water hyacinth from the navigable waters in the States named in so far as it is or may become an obstruction to navigation, \$20,000.

Galveston Harbor, Galveston Channel, Port Bolivar Channel, Texas City Channel, and Houston Ship Channel, Texas: For maintenance, \$100,000; continuing improvement by construction of seawall extension to protect Galveston Channel, \$200,000; in all, \$300,000. The unexpended balances of appropriations heretofore made for the improvement of Galveston Harbor are hereby made available for improvement in accordance with the report submitted in House Document Numbered Seven hundred and fifty-eight, Sixty-fifth Congress, second session.

Harbor at Sabine Pass and Port Arthur Canal, Sabine-Neches Canal, and Johnsons Bayou, Louisiana and Texas: For maintenance, \$20,000.

Red and Sulphur Rivers, Arkansas and Texas, and Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana: For maintenance, \$5,000.

Red, Black, Ouachita, Tensas, Boeuf, and Saline Rivers, and Bayous Maçon, Bartholomew, D'Arbonne, and Corney, Arkansas and Louisiana: For maintenance, \$70,000; continuing improvement of Ouachita River by construction of locks and dams heretofore authorized, \$100,000; in all, \$170,000.

Yazoo River and tributaries, Mississippi: For maintenance, including Yazoo, Tallahatchie, Coldwater, and Big Sunflower Rivers, Tehula Lake, Steele and Washington Bayous, Lake Washington, and Bear Creek, \$25,000.

Black and Current Rivers, Arkansas and Missouri; White, Saint Francis, and L'Anguille Rivers, and Blackfish Bayou, Arkansas: For maintenance, \$5,000.

Mississippi River from the mouth of the Ohio River to and including the mouth of the Missouri River: Continuing improvement and for maintenance, \$100,000.

Mississippi River from the mouth of the Missouri River to Minneapolis, Minnesota: Continuing improvement and for maintenance, \$500,000.

Mississippi River between Saint Paul and Minneapolis, and between Brainerd and Grand Rapids, Mississippi and Leech Rivers, and reservoirs at headwaters of Mississippi River: Completing improvement of Mississippi River between Saint Paul and Minneapolis, \$80,000; completing improvement of reservoirs at headwaters, \$32,000; in all, \$112,000.

Saint Croix River, Wisconsin and Minnesota; Minnesota River, Minnesota; Lake Traverse, Minnesota and South Dakota; Red River of the North, Minnesota and North Dakota; Warroad Harbor and River, Zippel Bay, and Lake of the Woods, Minnesota: For maintenance, \$6,000.

Missouri River: For maintenance and continuing improvement with a view to securing a permanent six-foot channel between Kansas City, Kansas, from the upper end of Quindaro Bend, and the mouth of the river, \$500,000.

Cumberland River, Tennessee and Kentucky: For maintenance above Nashville, \$5,000.

Tennessee River, Tennessee, Alabama, and Kentucky: For maintenance and continuing improvement, \$343,000.

Ohio River: Continuing improvement by the construction of locks and dams with a view to securing a navigable depth of nine feet, \$5,000,000: *Provided*, That the Secretary of War is hereby authorized to modify the project for the improvement of the Ohio River in accordance with the report submitted in House Document Numbered Sixteen hundred and ninety-five, Sixty-fourth Congress, second session: *Provided further*, That the modification of the existing project by omitting locks and dams below Dam Numbered Forty-eight, as herein authorized, shall not become effective until it shall be satisfactorily demonstrated that the project depth of nine feet on that section of the river can be maintained by open-channel work: *And provided further*, That the Secretary of War is hereby requested to investigate and submit to Congress on or before the first Monday in December, nineteen hundred and eighteen, a report showing (a) the status of water terminals at cities and towns along the Ohio River between Pittsburgh and Cairo, inclusive, and whether owned by municipalities or some other public agency, and whether the same are satisfactory as to location, construction, and equipment; (b) the names of cities and towns where an interchange of traffic exists between the water transportation lines and the railroads; (c) a list of the water transportation lines existing and proposed on the Ohio River with a description of the number and type of boats in operation and under construction or to be constructed and as to whether the same are appropriate and suitable for the traffic; (d) the names of cities and towns where no adequate public terminals exist, together with a statement of any prospective plans for water terminals and the status of same; (e) any recommendation for the development of transportation on such river.

Allegheny River, Pennsylvania: For maintenance of open-channel work, \$5,000; continuing improvement by construction of locks and dams, \$500,000; in all, \$505,000.

Pittsburgh Harbor, Pennsylvania: For maintenance, \$6,000.

Grand Marais, Marquette, Marquette Bay, and Ontonagon Harbors, and Keweenaw Waterway, Michigan; Ashland and Port Wing Harbors, Wisconsin; Duluth-Superior Harbor, Minnesota and Wisconsin; Agate Bay and Grand Marais Harbors, Minnesota: For maintenance, \$21,000.

Manistique Harbor, Michigan; Menominee, Oconto, Green Bay, Algoma, Kewaunee, Two Rivers, Manitowoc, Sheboygan, Port Washington, Milwaukee, Racine, Kenosha, and Waukegan Harbors,

Sturgeon Bay and Lake Michigan Ship Canal, and Fox River, Wisconsin: For maintenance, \$121,350.

Saint Joseph Harbor and River, Saugatuck Harbor and Kalamazoo River, South Haven, Holland, Grand Haven, Muskegon, White Lake, Penwater, Ludington, Manistee, Portage Lake, Arcadia, Frankfort, Charlevoix, and Petoskey Harbors, and Grand River, Michigan: For maintenance, \$70,500.

Ship channel connecting waters of the Great Lakes between Chicago, Duluth, and Buffalo, including Saint Marys River, Saint Clair River, channels in Lake Saint Clair, and Detroit River, Michigan: For maintenance, \$50,000; completing improvement of fourth lock in Saint Marys River, \$470,000; in all, \$520,000.

Mackinac, Cheboygan, Rogers City, Alpena, Harbor Beach, and Monroe Harbors, Saginaw, Black, Clinton, and Rouge Rivers, Michigan: For maintenance, \$7,000; continuing improvement of Harbor Beach Harbor, \$106,000; in all, \$113,000.

Toledo, Port Clinton, Sandusky, Huron, Vermilion, Lorain, Cleveland, Fairport, Ashtabula, and Conneaut Harbors, Ohio: For maintenance, \$50,000.

Erie Harbor, Pennsylvania; Dunkirk and Buffalo Harbors, Black Rock Channel and Tonawanda Harbor, and Niagara River, New York: For maintenance, \$61,000.

Olcott, Charlotte, Pultneyville, Great Sodus Bay, Little Sodus Bay, Oswego, Cape Vincent, and Ogdensburg Harbors, New York: For maintenance, \$43,000.

Los Angeles Harbor, California: Continuing improvement in accordance with the report submitted in House Document Numbered Eight hundred and ninety-six, Sixty-third Congress, second session, and subject to the conditions set forth in said document, \$100,000; for improvement in accordance with the report submitted in House Document Numbered One thousand and seventy-two, Sixty-fifth Congress, second session, and subject to the conditions set forth in said document, \$204,000; in all, \$304,000. Whenever the State of California, or the city or county of Los Angeles, or other public agency created by the State of California, shall undertake to secure, and shall have provided funds for securing, any lands, easements or rights of way required for the silt-diversion works authorized for the protection of Los Angeles and Long Beach Harbors, with a view to conveying the same to the United States free of cost, in accordance with the conditions set forth in House Document Numbered Four hundred and sixty-two, Sixty-fourth Congress, first session, and shall for any reason be unable to obtain the same by voluntary purchase and sale, the Secretary of War may, in his discretion, cause proceedings to be instituted in the name of the United States for the acquirement of said land, easements, or rights of way, under and in accordance with the provisions of section nine of the river and harbor Act of August eighth, nineteen hundred and seventeen: *Provided*, That upon the filing of the petition for the condemnation of any such lands, easements, or rights of way, as hereinbefore provided, the United States may take immediate possession thereof, to the extent of the interest to be acquired, and use the same in the prosecution of the authorized work of improvement.

Waterway connecting Long Beach and Los Angeles Harbors, California: Completing improvement in accordance with the report

submitted in House Document Numbered Four hundred and sixty, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document, \$130,350.

San Francisco, Oakland, Richmond, Monterey, and Humboldt Harbors, Redwood and Petaluma Creeks, Napa River, San Pablo Bay, Mare Island Strait, and Suisun Channel, California: For maintenance, \$4,000; continuing improvement of Oakland Harbor, \$100,000; for improvement of Petaluma Creek in accordance with the report submitted in House Document Numbered Eight hundred and forty-nine, Sixty-fifth Congress, second session, and subject to the conditions set forth in said document, \$20,000; in all, \$124,000.

Crescent City Harbor, California: The improvement of Crescent City Harbor is hereby authorized in accordance with the report submitted in House Document Numbered Four hundred and thirty-four, Sixty-fourth Congress, first session, and subject to the conditions set forth in said document: *Provided*, That before entering upon the prosecution of the work herein authorized the Secretary of War shall require the contribution of the sum of \$200,000 from local interests, and the said Secretary is hereby authorized to prosecute the work of improvement with such funds when so furnished.

Sacramento, Feather, San Joaquin, and Mokelumne Rivers, and Stockton and Mormon Channels (diverting canal), California: For maintenance, \$10,500.

Coquille, Coos, Siuslaw, and Yaquina Rivers, and Coos, Tillamook, and Nehalem Bays, Oregon: For maintenance and continuing improvement of channel over the bar at Coos Bay, \$40,000.

Columbia and lower Willamette Rivers below Vancouver, Washington, and Portland, Oregon, and mouth of Columbia River, Oregon and Washington: Continuing improvement and for maintenance of Columbia and lower Willamette Rivers below Vancouver, Washington, and Portland, Oregon, \$250,000.

Willamette River above Portland and at Willamette Falls, Yamhill River and Clatskanie River from the mouth to Clatskanie, Oregon; Cowlitz, Lewis, and Grays Rivers, Washington: For maintenance, \$12,000; continuing improvement of Lewis River, including North and East Forks, \$13,500; in all, \$25,500.

Puget Sound and its tributary waters, Olympia, Tacoma, and Bellingham Harbors, Lake Washington Ship Canal, Snohomish and Skagit Rivers, Swinomish Slough, waterway connecting Port Townsend Bay and Oak Bay, Columbia River between Wenatchee and Kettle Falls, Washington: For maintenance, \$10,000.

SEC. 2. Where separate works or items are consolidated herein and an aggregate amount is appropriated therefor, the amount so appropriated shall, unless otherwise expressed, be expended in securing the maintenance and improvement according to the respective projects adopted by Congress after giving due regard to the respective needs of traffic. The allotments to the respective works so consolidated shall be made by the Chief of Engineers as authorized by the Secretary of War. In case such works or items are consolidated and separate amounts are given to individual projects, the amounts so named shall be expended upon such separate projects unless, in the discretion of the Chief of Engineers and the Secretary of War, another allotment or division should be made of the same. Any balances remaining to the credit of the consolidated items shall be carried to

the credit of the respective aggregate amounts appropriated for the consolidated items.

SEC. 3. That for examinations, surveys, and contingencies for rivers and harbors for which there may be no special appropriation, the sum of \$200,000 is hereby appropriated.

SEC. 4. That no part of the funds herein or hereafter appropriated for works of river and harbor improvement shall be used to pay for any work done by private contract if the contract price is more than twenty-five per centum in excess of the estimated cost of doing the work by Government plant: *Provided*, That in estimating the cost of doing the work by Government plant, including the cost of labor and materials, there shall also be taken into account proper charges for depreciation of plant and all supervising and overhead expenses and interest on the capital invested in the Government plant, but the rate of interest shall not exceed the maximum prevailing rate being paid by the United States on current issues of bonds or other evidences of indebtedness.

SEC. 5. That whenever the Secretary of War, in pursuance of authority conferred on him by law, causes proceedings to be instituted in the name of the United States for the acquirement by condemnation of any lands, easements, or rights of way needed for a work of river and harbor improvement duly authorized by Congress, the United States, upon the filing of the petition in any such proceedings, shall have the right to take immediate possession of said lands, easements, or rights of way, to the extent of the interest to be acquired, and proceed with such public works thereon as have been authorized by Congress: *Provided*, That certain and adequate provision shall have been made for the payment of just compensation to the party or parties entitled thereto, either by previous appropriation by the United States or by the deposit of moneys or other form of security in such amount and form as shall be approved by the court in which such proceedings shall be instituted. The respondent or respondents may move at any time in the court to increase or change the amounts or securities, and the court shall make such order as shall be just in the premises and as shall adequately protect the respondents. In every case the proceedings in condemnation shall be diligently prosecuted on the part of the United States in order that such compensation may be promptly ascertained and paid.

SEC. 6. That in all cases where private property shall be taken by the United States for the public use in connection with any improvement of rivers, harbors, canals, or waterways of the United States, and in all condemnation proceedings by the United States to acquire lands or easements for such improvements, where a part only of any such parcel, lot, or tract of land shall be taken, the jury or other tribunal awarding the just compensation or assessing the damages to the owner, whether for the value of the part taken or for any injury to the part not taken, shall take into consideration by way of reducing the amount of compensation or damages any special and direct benefits to the remainder arising from the improvement, and shall render their award or verdict accordingly.

SEC. 7. That hereafter the Chief of Engineers, United States Army, shall indicate in his annual reports the character of the terminal and transfer facilities existing on every harbor or waterway under maintenance or improvement by the United States, and state whether

they are considered adequate for existing commerce. He shall also submit one or more special reports on this subject, as soon as possible, including, among other things, the following:

(a) A brief description of such water terminals, including location and the suitability of such terminals to the existing traffic conditions, and whether such terminals are publicly or privately owned, and the terms and conditions under which they may be subjected to public use.

(b) Whether such water terminals are connected by a belt or spur line of railroad with all the railroads serving the same territory or municipality, and whether such connecting railroad is owned by the public and the conditions upon which the same may be used, and also whether there is an interchange of traffic between the water carriers and the railroad or railroads as to such traffic which is carried partly by rail and partly by water to its destination, and also whether improved and adequate highways have been constructed connecting such water terminal with the other lines of highways.

(c) If no water terminals have been constructed by the municipality or other existing public agency there shall be included in his report an expression of opinion in general terms as to the necessity, number, and appropriate location of such a terminal or terminals.

(d) An investigation of the general subject of water terminals, with descriptions and general plans of terminals of appropriate types and construction for the harbors and waterways of the United States suitable for various commercial purposes and adapted to the varying conditions of tides, floods, and other physical characteristics.

SEC. 8. That if the Secretary of War shall determine that any of the contracts for work of river and harbor improvements entered into but not completed prior to April sixth, nineteen hundred and seventeen, the date of the entrance of the United States into the war with Germany, have become inequitable and unjust on account of increased costs of materials and labor and other unforeseen conditions arising out of the war, he is hereby authorized, in his discretion and with the consent of the contractors, to modify and readjust the terms of said contracts in such manner as he may deem equitable and just: *Provided*, That such modifications and readjustments shall apply only to work under said contracts remaining to be done hereafter and shall not include any relief for work performed heretofore under said contracts, and any such sum as may be necessary to provide for the increased cost of the contracts due to said modifications and readjustments, not exceeding the sum of \$2,000,000, is hereby appropriated out of any money in the Treasury not otherwise appropriated: *Provided further*, That as a condition of any such contract being so modified, the Secretary of War shall have the right, at the end of any fiscal year, until the contract is completed, to make such further modifications as in his judgment shall be advantageous to the United States and just to the contractor.

SEC. 9. That hereafter when the expenses of persons engaged in field work or traveling on official business outside of the District of Columbia and away from their designated posts of duty are chargeable to appropriations of the Engineer Department, a per diem of not exceeding \$4 may be allowed in lieu of subsistence when not otherwise fixed by law.

Approved, July 18, 1918.

41

**STATEMENT SHOWING AMOUNTS APPROPRIATED OR ALLOTTED
FOR MAINTENANCE AND IMPROVEMENT OF CERTAIN WORKS
OF RIVER AND HARBOR IMPROVEMENT UNDER THE PROVISIONS
OF THE RIVER AND HARBOR ACT APPROVED JULY 18, 1918.**

NOVEMBER 15, 1918.

Project.	Mainte- nance.	Further improve- ment.
Boston (Mass.) district: Boston Harbor, Mass.....	\$40,000	.....
Newport (R. I.) district:		
New Bedford and Fairhaven Harbors, Mass.....	15,000	.....
Pawtucket (Seekonk) River, R. I.....	10,000	.....
New London (Conn.) district:		
Pawcatuck River, R. I. and Conn.....		\$2,500
Connecticut River below Hartford, Conn.....	15,000	.....
New Haven Harbor, Conn.....	14,000	.....
Housatonic River, Conn.....	8,000	.....
First New York (N. Y.) district:		
East River and Hell Gate, N. Y.....		2,200,000
Hudson River Channel, New York Harbor.....		200,000
Narrows of Lake Champlain, N. Y. and Vt.....		200,000
Second New York (N. Y.) district:		
New York Harbor, channel between Staten Island and Hoffman and Swinburne Islands.....		75,000
Newtown Creek, N. Y.....	15,000	.....
Mattituck Harbor, N. Y.....	5,000	.....
Third New York (N. Y.) district:		
Shrewsbury River, N. J.....	10,000	.....
Philadelphia (Pa.) district:		
Delaware River, N. J., Lalor Street, Trenton, to upper railroad bridge.....		150,000
Delaware River, Pa., N. J., and Del., Philadelphia, Pa., to the sea.....	450,000	650,000
Schuylkill River, Pa.....		300,000
Wilmington (Del.) district:		
Absecon Inlet, N. J.....	20,000	.....
Wilmington Harbor, Del.....	50,000	.....
Waterway on the coast of Virginia.....	1,000	.....
Baltimore (Md.) district:		
Baltimore Harbor and Channels, Md.....	100,000	200,000
Wicomico River, Md.....	3,000	.....
Washington (D. C.) district:		
Potomac River at Washington, D. C.....	5,000	.....
Occoquan Creek, Va.....	6,000	.....
Norfolk (Va.) district:		
Norfolk Harbor and Channels, Va.—		
Norfolk Harbor, Va.....		1,134,000
Thimble Shoal Channel, Va.....		406,000
Channel to Newport News, Va.....		400,000
Appomattox River, Va.....		50,000
Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C.....		500,000
Wilmington (N. C.) district:		
Pamlico and Tar Rivers, N. C.....	7,000	.....
Neuse River, N. C.....	7,000	.....
Contentnea Creek, N. C.....	2,200	.....
Trent River, N. C.....	3,000	.....
Beaufort Harbor, N. C.....	4,000	.....
Waterway connecting Core Sound and Beaufort Harbor, N. C.....	2,000	.....

Project.	Maintenance.	Further improvement.
Wilmington (N. C.) district—Continued.		
Inland waterway, Beaufort to Jacksonville, N. C.	\$4, 500	.....
Morehead City Harbor, N. C.	2, 500	.....
Cape Fear River, N. C., at and below Wilmington.....	30, 000	.....
Cape Fear River above Wilmington, N. C., locks and dams.	12, 000	\$40, 000
Charleston (S. C.) district:		
Winyah Bay, S. C.	50, 000	50, 000
Inland waterways between Charleston Harbor, S. C., and Alligator Creek (opposite McClellansville), S. C.	5, 000	.....
Charleston Harbor, S. C.	40, 000	1, 570, 000
Savannah (Ga.) district:		
Savannah Harbor, Ga.	80, 000	.....
Savannah River below Augusta, Ga.	20, 000	.....
Darien Harbor, Ga.	2, 000	.....
Satilla River, Ga.	2, 000	.....
Altamaha River, Ga.		5, 000
Oconee River, Ga.		10, 000
Ocmulgee River, Ga.		25, 000
Brunswick Harbor, Ga.	20, 000	.....
Jacksonville (Fla.) district:		
Key West Harbor, Fla.	150, 000	.....
Caloosahatchee River, Fla.	4, 000	.....
Hillsboro Bay, Fla.	20, 000	300, 000
Removing the water hyacinth from navigable waters in the State of Florida.....	8, 000	.....
Indian River, Fla.	20, 000	.....
Montgomery (Ala.) district:		
Apalachicola Bay, Fla.	9, 000	.....
Holmes River, Fla.	2, 000	.....
Blackwater River, Fla.	5, 000	.....
Pensacola Harbor, Fla.	10, 000	.....
Mobile (Ala.) district:		
Mobile Harbor, Ala.	160, 000	340, 000
Gulfport Harbor and Ship Island Pass, Miss.		80, 000
Pascagoula River, Miss.	10, 000	.....
Biloxi Harbor, Miss.	5, 000	.....
New Orleans (La.) district:		
Passes of Mississippi River—		
Southwest Pass.		1, 450, 000
South Pass Channel (maintenance).....	250, 000	.....
Waterway from the Mississippi River to the Sabine River, La. (project for a section between Mermentau and Sabine Rivers modified). ....		.....
Calcasieu River and Pass, La.	5, 000	.....
Removing the water hyacinth, Louisiana, Alabama, Mississippi, and Texas.	20, 000	.....
Galveston (Tex.) district:		
Galveston Harbor, Tex. (modification of project adopted). ....		.....
Galveston Channel, Tex.	100, 000	200, 000
Dallas (Tex.) district:		
Sabine-Neches Canal, Tex.	20, 000	.....
Cypress Bayou and waterway between Jefferson, Tex., and Shreveport, La.	5, 000	.....
Vicksburg (Miss.) district:		
Red River below Fulton, Ark.	35, 000	.....
Ouachita and Black Rivers, Ark. and La.	25, 000	100, 000
Tensas River and Bayou Macon, La.	4, 000	.....
Boeuf River, La.	2, 000	.....
Saline River, Ark.	1, 500	.....
Bayous D'Arbonne and Corney, La.	2, 500	.....
Yazoo River, Miss.	8, 000	.....

¹ Includes maintenance.

² Not yet allotted.

Project.	Maintenance.	Further improvement.
Vicksburg (Miss.) district—Continued.		
Tallahatchie and Coldwater Rivers, Miss.....	\$5, 000	.....
Big Sunflower River, Miss.....	12, 000	.....
Little Rock (Ark.) district:		
Black River, Ark. and Mo.....	1, 000	.....
Current River, Ark. and Mo.....	1, 000	.....
St. Francis and L'Anguille Rivers and Blackfish Bayou, Ark.....	3, 000	.....
St. Louis (Mo.) district:		
Mississippi River, between the Ohio and Missouri Rivers.....		¹ \$100, 000
Rock Island (Ill.) district:		
Mississippi River, between Missouri River and Minneapolis, Minn.....		¹ 500, 000
St. Paul (Minn.) district:		
Mississippi River between St. Paul and Minneapolis, Minn.....		80, 000
Reservoirs at headwaters of Mississippi River.....		32, 000
St. Croix River, Wis. and Minn.....	200	.....
Warroad Harbor and Warroad River, Minn.....	3, 800	.....
Zippel Bay, Lake of the Woods, Minn.....	2, 000	.....
Kansas City (Mo.) district:		
Missouri River. Kansas City to the mouth.....	100, 000	400, 000
Nashville (Tenn.) district:		
Cumberland River, Tenn. and Ky., above Nashville.....	5, 000	.....
Chattanooga (Tenn.) district:		
Tennessee River above Chattanooga.....		¹ 160, 000
Tennessee River, Chattanooga to Riverton.....		40, 000
Tennessee River below Riverton.....	15, 000	128, 000
Ohio River:		
Construction of locks and dams.....		5, 000, 000
(Modification of project for lock and dam construction authorized.)		
Pittsburgh (Pa.) district:		
Allegheny River, Pa., open-channel work.....	5, 000	.....
Allegheny River, Pa., construction of locks and dams.....		500, 000
Pittsburgh Harbor, Pa.....	6, 000	.....
Duluth (Minn.) district:		
Ashland Harbor, Wis.....	6, 000	.....
Keweenaw waterway, Mich.....	15, 000	.....
Milwaukee (Wis.) district:		
Manistique Harbor, Mich.....	6, 000	.....
Green Bay Harbor, Wis.....	13, 500	.....
Fox River, Wis.....		¹ 22, 500
Sturgeon Bay and Lake Michigan Ship Canal, Wis.....	13, 500	.....
Algoma Harbor, Wis.....	10, 000	.....
Two Rivers Harbor, Wis.....	3, 350	.....
Manitowoc Harbor, Wis.....	13, 000	.....
Sheboygan Harbor, Wis.....	14, 500	.....
Port Washington Harbor, Wis.....	2, 000	.....
Milwaukee Harbor, Wis.—Outer harbor.....	12, 500	.....
Kenosha Harbor, Wis.....	4, 500	.....
Waukegan Harbor, Ill.....	6, 000	.....
Grand Rapids (Mich.) district:		
South Haven Harbor, Mich.....	4, 000	.....
Grand Haven Harbor, Mich.....	25, 000	.....
White Lake Harbor, Mich.....	3, 500	.....
Manistee Harbor, Mich.....	6, 000	.....
Frankfort Harbor, Mich.....	27, 000	.....
Charlevoix Harbor, Mich.....	5, 000	.....

¹ Includes maintenance.

Project.	Maintenance.	Further improvement.
Detroit (Mich.) district:		
St. Marys River, Mich. (fourth lock).....		\$470, 000
Channels in Lake St. Clair, Mich.....	\$50, 000	
Alpena Harbor, Mich.....	7, 000	
Harbor Beach Harbor of Refuge, Mich.....		106, 000
Cleveland (Ohio) district:		
Toledo Harbor, Ohio.....	35, 000	
Sandusky Harbor, Ohio.....	10, 000	
Huron Harbor, Ohio.....	5, 000	
Buffalo (N. Y.) district:		
Erie Harbor, Pa.....	50, 000	
Black Rock Channel and Tonawanda Harbor, N. Y.....	10, 000	
Niagara River, N. Y.....	1, 000	
Charlotte Harbor, N. Y.....	13, 000	
Great Sodus Bay Harbor, N. Y.....	2, 000	
Oswego Harbor, N. Y.....	23, 000	
Ogdensburg Harbor, N. Y.....	5, 000	
Los Angeles (Cal.) district:		
Los Angeles Harbor, Cal.: Inner harbor.....		304, 000
Waterway connecting Long Beach and Los Angeles Har- bors, Cal.....		130, 350
First San Francisco (Cal.) District:		
Oakland Harbor, Cal.....	4, 000	100, 000
Petaluma Creek, Cal.....		20, 000
Crescent City Harbor, Cal. (project adopted on condition local interests contribute \$200,000 in cash to commence operations).		
Third San Francisco District:		
Mokelumne River, Cal.....	1, 500	
Sacramento River, Cal.....	9, 000	
First Portland (Oreg.) District:		
Coos Bay, Oreg.....		¹ 40, 000
Second Portland (Oreg.) District:		
Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg.....		¹ 250, 000
Clatskanie River, Oreg.....	1, 000	
Lewis River, Wash.....	4, 500	13, 500
Cowlitz River, Wash.....	6, 000	
Grays River, Wash.....	500	
Seattle (Wash.) District:		
Puget Sound and its tributary waters, Wash.....	10, 000	
Modification and readjustment of terms of uncompleted con- tracts for work of river and harbor improvement.....		2, 000, 000
Total.....	2, 538, 050	21, 033, 850
Examinations, surveys, and contingencies for rivers and harbors.....		² 200, 000
Grand total for bill.....		23, 771, 900

¹ Includes maintenance.² \$500 of this amount was allotted to Kansas River, Kans.



